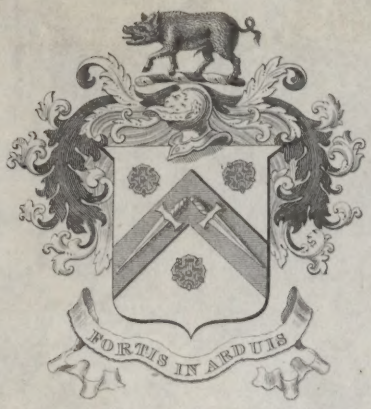

Findlay.

1st edn Pres. copy.

To

The Revd Dr Findlay

with most respectful Compliments

From

The Author

A

GENERAL ACCOUNT

OF THE

HUNTERIAN MUSEUM,

GLASGOW:

INCLUDING

HISTORICAL AND SCIENTIFIC NOTICES

OF THE VARIOUS OBJECTS OF

ART, LITERATURE, NATURAL HISTORY,
ANATOMICAL PREPARATIONS, ANTIQUITIES, &c.

IN THAT

CELEBRATED COLLECTION.

BY

CAPTAIN J. LASKEY,

MEMBER OF THE EDIN. WERNERIAN SOCIETY OF NATURAL HISTORY,
L. S. H. S. &c. &c.

GLASGOW:

PUBLISHED BY JOHN SMITH & SON;
IN LONDON BY LONGMAN, HURST, REES, ORME, & BROWN;
AND
BY A. CONSTABLE & CO. AND JOHN BALLANTYNE & CO.
EDINBURGH.

1813.

ENTERED IN STATIONERS' HALL.

PRINTED BY WILLIAM LANG, 62, BELL-STREET, GLASGOW.

HUNTERIAN MUSEUM.

INTRODUCTION.

THIS unrivalled collection was formed by the late celebrated WILLIAM HUNTER, M. D. from whom it derives its name Considered as the production of the labour and intelligence of one individual, the quantity of rare and valuable articles which it contains excites in the mind astonishment at the extent of acquisition, discovery and utility, to which the human powers can attain under due cultivation, even during the limited period of life.

It is not within the scope of these prefatory remarks to give a detailed biography of Dr. HUNTER: that is left to *abler* hands, and through a more extended channel. It may suffice to say here, that he was the framer of his own fortune; and amidst the toils of an arduous and laborious profession, of which he was at the head, his genius and resources enabled him to find time to cultivate, in an eminent degree, Literature and the Sciences; to acquire and to maintain the society and friendship of the most eminent Characters of his day, the circle of his friends extending even to the Throne itself; to live unrivalled, and to die possessed of wealth, honourably acquired in the exercise of his profession, with the universal esteem and regret of all to whom he was known.

Dr. HUNTER was a native of Scotland. He was born at Long Calderwood in the parish of Kilbride, Lanarkshire, the patrimonial estate of his father, in May 1718. At the age of fourteen he was sent to the University of Glasgow, where he prosecuted a general line of study, being originally destined for the church.

Circumstances, now immaterial, occurred to set aside this determination; and on leaving College it was his good fortune to meet with the late eminent Dr. Cullen, who then practised at Hamilton. He now turned his attention exclusively to the stu-

dy of Medicine, and in prosecution of this object, he resided three years with Dr. Cullen, as a private pupil. On leaving him he resumed his medical studies in Edinburgh, and from thence proceeded to London in 1741.

There, in 1746, he commenced his public lectures on Anatomy. He was admitted a member of the Corporation of Surgeons in 1747. In 1750 he obtained from the University of Glasgow the degree of Doctor of Medicine, and was afterwards successively elected Physician to the Lying-in Hospital, London; Fellow of the Royal and Antiquarian Societies; appointed Professor of Anatomy to the Royal Academy, and Physician Extraordinary to her Majesty; and in 1781, he was unanimously elected President of the College of Physicians in London.

His name, and the reputation of his talents, had at this period become generally known on the Continent. He was elected an Associate of the Royal Medical Society of Paris in 1780, and in 1782 he was chosen Member of the French Royal Academy of Sciences. He had now attained the summit of his professional rank.

The well known JOHN HUNTER, a name equally distinguished as his own, was his brother, from whose congeniality of taste and study, he was greatly assisted in the admirable Anatomical Department of his Museum. The Doctor had an early wish to benefit his country, by turning his attainments to purposes of public utility; and, regardless of personal emolument, he accordingly presented a memorial to Government, about the year 1765, for the site of an Anatomical Theatre, offering to expend seven thousand pounds on the building, besides the endowment, in perpetuity, of a Professorship of Anatomy to be attached to the establishment. To this he meant also to devote his collection of Anatomical Preparations and Museum.

It is fortunate for Scotland that the overture was declined, or neglected. Dr. HUNTER, however, did not on that account either slacken his exertions, or limit the expense with which the attainment of the peculiar objects of his research was accompanied. As his fortune increased, he enlarged the sphere and number of his acquisitions. He became a purchaser of the highest class of paintings, including many of the best specimens of the different schools then to be met with; and, with indefatigable pains, and unlimited expense, he accumulated the

choicest treasures of the Typographic Art, Coins in Series, Medals, Curious Works of Art, Natural History, Antiquities, &c. &c.

Of these the Hunterian Museum is chiefly composed: but since its destination to the University of Glasgow, it is proper to add, that most of the departments have received valuable additions, partly from the munificence of the learned body under whose direction it is placed, and frequently from the liberality of public donation.

Dr. HUNTER, for many years previous to his death, was subject to gout; and this disease proved fatal to him in 1783. By his will, the use of his Museum, under certain conditions and for a term of years, devolved to his Nephew, the present Dr. BAILLIE, and failing him, to Mr. CRUIKSHANKS; and the whole was thereafter bequeathed to the College of Glasgow, with the addition of £8,000 in money, towards its support and further augmentation.

After the death of Mr. CRUIKSHANKS, Dr. BAILLIE, with the liberality which marks his character, relinquished his claim, and the Museum was accordingly transported to Glasgow in 1807.

At the expense of almost £12,000, a magnificent and appropriate building, from an admirable design of Mr. STARK, has been erected in the Gardens of the University for its reception; and the various and interesting particulars of which it is composed, have been arranged and displayed with a degree of science and taste equally honourable to the memory of the Donor and the liberality of the College.

The details of the value, rarity, and curiosity of the articles which it contains, are sufficiently full in the following pages to preclude the necessity of enumeration here. As a study of Anatomy, Natural History, Antiquity, and rare Literature, this Museum must rank amongst the highest; and the arrangements of the College render the attainment of its advantages easy to every one desirous of admission. The hours of attendance for strangers are from twelve to two every day, except Sunday. Tickets of admission may be obtained at the Porter's Lodge, College Gate.

In presenting to the Public this account of the Hunterian Museum, the Author is aware that an apology may be required for the inaccuracies, with which, notwithstanding all the attention he has been able to bestow upon it, the volume may be charged; and he has only to plead for indulgence, that during its progress through the press, his professional duties had called him from Glasgow, and prevented his personal reference to the objects themselves, while their description was under his revision.

It has, perhaps, also been detrimental to the work, that the distance of the Author rendered it impossible for him to avail himself of the literary and scientific aid of friends on the spot, whose encouragement at first led him to extend memoranda, originally taken for his own gratification, into a regular and digested account of the Museum; and in compliance with whose suggestions it has been his aim, not merely to afford a verbal catalogue for the assistance of the visitor, but to give such an analysis and detailed account of the establishment, as shall be sufficiently intelligible and interesting, in itself, to the public at large.

The Author is desirous of acknowledging to Dr. Couper the Superintendant, and to the Trustees of the Museum, his obligations for the ready access afforded him, and for the polite attention with which his enquiries have been furthered. He feels himself peculiarly called upon to notice the beneficial assistance he derived from Dr. M'Dougall in the Anatomical Department; from Thomas Hopkirk, Esq. Younger of Dalbeth, for the unreserved use of his valuable library of Works on Natural History and Science; and from Mr. Smith, Youngest, Bookseller, for the aid afforded him in pointing out many rarities in the Bibliographical Department, for which his habits and acquaintance with the subject so peculiarly qualify him.

Dumbarton Castle,
July 1*st*, 1813.

GENERAL ANALYSIS OF THE CONTENTS.

ANTI-ROOM.

SALOON.

APARTMENT ON THE LEFT.

APARTMENT ON THE RIGHT.

HALL OF ANATOMY.

HALL OF THE ELEPHANT.

ANTIQUE ROOM.

VESTIBULE.

STAIR-CASE.

CONTENTS.

CORRECTIONS AND ADDITIONS.

Page 9, add to Case 1, Birds, No. 6, White-Billed Jacamar, Lath. Syn.
Page 9, alter in Case 2, Birds, No. 2, White-Headed Heron, *Ardea Major.* Linn. which has been moved to Case 4, No. 7, page 18, and insert White-Headed Frigate Pelican, Lath. Syn. now No. 2.
Page 15, add to Case 3, Birds, No. 9, Bare-Necked Crow, Lath. Syn.
Page 18, add to Case 4, Birds, No. 8, Magellanic Goose, *L'Ore des Terres Magellaniques*, Buf. pl. Ent. 1006.
Page 18, add to Case 4, Birds, No. 9, Tufted Shag, Lath. Syn.
Page 18, add to Case 4, Birds, No. 10, Wood Ibis, *Tantalus Loculator*, Linn.
Page 23, Case 5, line 1, No. 5, read *Scorpio Afer*, Linn.
Page 25, Case 5, line 3. No. 27, " fur is made," *read* " is obtained."
Page 29, line 35, *read* Professor Jameson.
Page 32, Case A, line 1. No. 4, Moraminosa, *read* Foraminosa.
Page 33, Case A, line 1. No. 13, Madrepora Virginia, *read* Virginea, and omit *a* before Shrubby.
Page 36, Case E, line 17, insert after " a large Bean Pod gathered from the Ragamahall Hills," Climbing Mimosa, *Mimosa Scandans*, Linn.
Page 38, line 49, insert *a* before Stone, and next line, instead of " all that was preserved," *read* " part of what was preserved."
Page 39, Case 4, line 44, *alter* " or becoming much lighter," to " more transparent."
Page 42, line 9, *alter* " Saggy Mineral Pitch," to *Slaggy.*
Page 43, line 54, *erase* " Coccolite from Arendahl in Norway."
Page 47, line 38, *read* " transmits the blood to *and from.*"
Page 58, line 10, *omit* " corresponding" before " villous ridges."
Page 66, line 43, *read* deltoid muscle.
Page 69, line 3, *omit* " from side to side."
Page 74, line 38, *alter* " Beak of an Albatross," to " Beak of a Pelican."
Page 77, No. 16, line 7, after " that it is emblematic of the Clyde," *add*, " *and of the great work in which they were engaged.*"
Page 77, Vestibule, No. 1, *read* Pelicanus Onocrotalus.
Page 82, Vestibule, add No. 19, Charlestown Pelican, Arctic. Zool. No. 507.
Page 85, line 28, *read* " Gneius Pompeius."

ANTI-ROOM.

On entering the Anti-room, the Visitor is requested to write his name and place of abode in the Album kept there for that purpose. His attention will then be directed to two elegant Busts, the one on the left, of GAVIN HAMILTON, a celebrated Painter, a native of Scotland, sculptured in marble at Rome, esteemed a good likeness. This Bust has been presented to the Museum since its arrival at the College. The other on the right is of Terra Cotta, most excellently modelled, but unfortunately unknown at present. It originally belonged to the Collection. Miscell.

These are placed on two mahogany Cabinets, which contain a vast collection of Foreign and British Insects of almost every Genus and Species. The beauty and rarity of many of the Species astonish the beholders, particularly the Species PAPILLIO MENELAUS, of the most brilliant vivid azure blue. PAPILLIO PRIAM, of the greatest rarity, as well as beauty. PAPILLIO JAIRUS, with his eye-like spots. PHOELENA LUNA, PAPILLIO NESTOR, PAPILLIO THOAS, and many others, too numerous for insertion here. On the right of the window, a small MUMMY is preserved in a glass case, the painting and hieroglyphics on which are in good preservation. On the Mantle Piece are several good specimens of GORGONIA FLABELLUM, or SEA FAN GORGONIA, more commonly known by the name of VENUS'S FAN, from the Indian Ocean. Nat. Hist.

A fine specimen of the NINE-BANDED ARMADILLO, (*Dasypus Novemcinctus*, Linn.) It is a native of South America, and received its name of Armadillo, or Hog in Armour, from the Spaniards. It is a harmless inoffensive animal; feeds on roots, fruits, and other vegetables, grows very fat, and is much esteemed for the delicacy of its flesh. The Indians hunt it with small dogs trained for the purpose; it rolls itself into a ball, and when opportunity occurs, rolls over a precipice, and escapes unhurt the pursuit of its enemies. It burrows in the ground with great expedition, having strong claws on its fore feet, with which it adheres so firmly to the ground, that if it should be caught by the tail whilst making its way into the earth, its resistance is so great, that it will sometimes leave it in the hands of its pursuers.

On the other side is the LONG-TAILED MANIS, (*Manis Tetradactyla*, Linn.) This rare animal is a native of India and Africa, is perfectly gentle and harmless, though from its being entirely covered with very large and sharp scales, it has a most formidable aspect, particularly when irritated, at which time it has the power of erecting them. Thus armed, the Tyger and Panther in vain make efforts to devour it, they can neither terrify it by their violence or crush it by their weight, and whenever they attempt to seize it they find themselves grievously wounded.

Opposite the window are hung eight Glass Cases of rare and valuable INSECTS of the scarabeous genus, in one of which are two fine specimens of (*Scarabæus Hercules*, Linn.) or HERCULES BEETLE. These are natives of Guadaloupe; the singular long horn of this insect is toothed on each side, and beneath is covered with a substance resembling yellow plush; the proboscis below is also toothed. Between these, it is said, the insect seizes the smaller branches of trees, and by swiftly flying round, soon saws them off, for the purpose of building its nest. Dr. Shaw, in his Naturalist's Miscellany, however, reckons the whole operation a vulgar error; it is a very mischievous insect, and difficult to be taken.

In a corresponding Case on the right, SCARABÆUS NEPTUNUS (Neptune Beetle) is preserved. This insect is excessively rare. The country from which it came is unknown. It is generally believed, by most Entomologists, that it is the fabrication of a German or Dutch Naturalist, by taking the body of Scarabæus Hercules, and the head and thorax of Scarabæus Actæon. As both these insects are in cases adjoining, the visitor may have the

Anti-Room pleasure of making the comparison. N. B The head of the insect is wanting.

Nat. Hist. On the left hand, a Case contains that extremely rare insect, SCARABÆUS GOLIATHUS, Linn. (*Cetonia Goliathus* of Fabricius) who has formed in his Entomological Work, a new genus for its reception. This specimen, at present the only one in Great Britain, is in the most excellent preservation. It is so rare, that not more than three or four are known in Europe. It was found floating down the river Gaboon, and is supposed to have been an inhabitant of the interior of Africa, where no European has yet had access. It is valued at 20 guineas, that sum having been offered for it lately.

The remaining Cases also contain a variety of rare and singular insects of the same genus, but as their names are, in general, affixed, it is unnecessary to recapitulate them here.

Antiquities. In the centre is a small mahogany case, containing a beautiful copy of the KORAN, written in Arabic, in a variety of curious and singular figures, on a stripe of vellum about 12 feet in length. By a happy combination of two rollers on which it revolves, it may be examined from one end to the other. This was presented to the Museum by Dr. SMITH, Minister of Galston. Above is a painting of a DWARF, well known in and about London, when living, by the name of LEATHER JACK, from his constantly wearing a coat of leather. (His skeleton is also in the Museum.) Over each door is a painting, one of that rare animal the AGOUTI; the other, the ROYAL or PIGMY ANTELOPE.

On the wall oppositite the fire place, is a fac-simile in plaster, framed and glazed, of the famous ANTIQUE STONE found at Rosetta, during the Campaigns of Bonaparte, together with the three Plates engraved by the order of the Society of Antiquaries of London. These were presented to the Museum by that liberal Patron of the Arts, the MARQUIS of DOUGLAS.

Among the numerous relics of Antiquity that have been found of late years, few have attracted such universal notice as the Triple Inscription from Rosetta. The singular fact of a Stone being inscribed with the same decree, not only in the sacred and vernacular Egyptian, but in the Greek Language, excited a hope that a Key to the Hieroglyphic character of ancient Egypt was at last discovered.—It was found by a Lieutenant of Engineers, while superintending the repairs of Fort Elleve, near the Bogar of Rosetta, about two leagues from the town; was brought to Cairo soon after Bonaparte's escape, and at length deposited with the Institute

The copies of this stone first taken, were made at Cairo by Citizens Marcel and Conté: one the Director of the National Printing-Office in Egypt; the other Chief of the Brigade of Aërostats. Two of them were presented by General Dugua to the National Institute at Paris in the sitting of August 23d, 1800.

The Stone itself was afterwards removed, with other rarities of ancient Art, to Alexandria, and when the City surrendered to the English, was claimed by General Menou, as his own private property. The artifice, however, was too shallow to attain its purpose; and the "Gem of Antiquity" as the French termed it, was at last shipped for England, where it arrived on board his Majesty's Ship L'Egyptienne, under the care of Col. Turner in the month of February 1802. On the 9th of March, Lord Hobart one of his Majesty's principal Secretaries of State, ordered it to be sent to the Society of Antiquaries, under whose direction a fac-simile of the three inscriptions has been engraven; and finally, in the month of June 1803, it was deposited in the Library of the British Museum.

From the Greek division of the decree we discover it was set up in remembrance of PTOLEMY EPIPHANES for his services to Religion and the State. He died by poison at the age of 29, about 153 years before the Birth of Christ.

Saloon.

Birds.

Case 1.

THE SALOON

Contains four niches, filled with Birds of the most beautiful plumage, some of which are also of the greatest rarity. We shall commence our description with the niche on the left of the entrance, marked No. 1.

1. PHEASANT. *Phasianus Colchicus*, Linn.

Size of a fowl; the bill is pale horn colour; irides yellow; sides of the head deep crimson, granulated, and running into a point behind; and in old birds elongated over the jaw like the wattle of a cock, but does not exceed the length of feathers at that part, which is full; this red space is dotted with minute black spots; from the nostrils spring a line of greenish black feathers, which passes under the eye, and a little beyond it; the rest of the head and neck is green gold, changing to violet and blue in some lights; lower part of the neck, breast, and sides, glossy reddish chesnut, each feather margined at the end with black; which in those of the neck, rising upwards a little way on the shaft, gives the feather the appearance of being bifid at the end; each feather on the shoulders and wing coverts, has more or less of a buff-coloured curved mark in the middle, bounded with a black line both within and without; the lower part of the back the same, but less distinct; rump plain glossy reddish brown, glossed with green; wing coverts brown, variegated with yellowish white; quills brown, spotted on both webs, with yellowish white; belly and vent dusky; the tail consists of eighteen feathers, the longest of which are twenty inches, the shortest less than five, hence very cuneiform; all of them have transverse bars of black on each side of the shaft, about 24 in number, on the two middle feathers, the others in proportion; the legs are dusky; furnished with a strong membrane between the toes, and a blunt spur three quarters of an inch above the hind toe. Weight from 2 to 3 pounds.

The female is less in size: its general colour brown, variegated with grey, rufous, and blackish; tail much shorter, but barred like the male; and the region of the eyes covered with feathers.

This bird, so well known, is at present found in a state of nature in almost the whole of the Old Continent, though originally supposed to have been an inhabitant only of the environs of the ancient Colchis. From the shortness of the wings they are not capable of making long flights, it is therefore probable that they have been purposely sent to every place in which they are now found. They are in great plenty in various parts of England, breed on the ground like the Partridge, laying from 12 to 15 eggs, smaller than those of a Hen, and similar to those of the Partridge, but paler: the young follow the mother like Chickens; the male crows like a Cock, but more shrill. M. Salerne and others observe, that the hen Pheasant, when done laying and sitting, will get the plumage of the male, and after that become so little respected by him, as to be treated with the same incivility as he would shew to one of his own sex.—Mr. John Hunter has a paper on this subject in the Phil. Trans. vol. 70, p. 527.

2. PENCILLED PHEASANT. *Phasianus Nycthemerus*, Linn.

This is larger than the common Pheasant, about 2¼ feet in length. The bill and irides yellow; sides of the head covered with a carunculated crimson bare skin, as in the common Pheasants, which rises upwards above each eye, like two horns, and in some birds hangs so deep below on each side of the jaw, as to appear like wattles; the head is crested, and is as well as all the under parts of the body, of a full purplish black; the upper parts are white, and each feather marked with three or four lines, one within another, all parallel to the margin; the tail is cuneiform, the feathers obliquely striated with

Saloon. black, except the two middle ones which are plain white; the legs are red,
——— and furnished with a spur behind of a white colour.
Birds. This species inhabits China, and is also bred in our Menageries. The eggs
——— are of a pale yellowish ash colour, with a blush of red.
Case 1.

3. GREAT BUSTARD. *Otis Tarda*, Linn.

This is the largest of the land fowl in our Islands, the male weighing 25 lbs. often more; the length about four feet, in breadth near nine, the head and neck are ash coloured; the back transversely barred with black and bright rust colour; quills black; belly white; tail barred with red and black, and consists of twenty feathers; the legs dusky, female about half the size of the male, and is furnished with a pouch capable of containing near 7 quarts of water, situated on the fore part of the neck, the entrance being immediately under the tongue. This is of use while the female is sitting, which is generally at a distance from water, or for the young till they can move from the nest. It is said they also use this reservoir of water against an enemy, by squirting it out with great force. The Bustard is confined to the Old Continent, as we do not remember to have heard of it farther to the South than Greece or Syria, and to the North, Sweden and Russia. It is very timid, avoiding all commerce with mankind. In England they are sometimes met with in troops of 50 and more on the open downs of Dorsetshire, the wolds in Yorkshire, and on Salisbury Plain in Wiltshire; are very slow in taking wing, and are frequently run down by Greyhounds. The female makes no nest, but lays her eggs (two in number, about the size of a Goose egg, of a pale olive brown, marked with spots of a deeper colour) on the ground, scratching an hole therein in some dry corn field. She abandons the eggs if they are merely touched in her absence.

4. WHITE SPOON BILL. *Platalea Leucorodia*, Linn.

Size of a Heron, but shorter in both neck and legs; length about two feet eight inches. The bill is six inches and a half long, very flat, and broadens out into the shape of a spoon at the extremity; it varies in colour, in some black, in others brown, sometimes spotted; from the base to two-thirds of its length it is crossed with several indentations, the rising parts of which are dark coloured; the tongue short, and shaped like a heart, irides grey, the lore, round the eyes and the throat, is bare and black; the whole plumage is white; in some specimens the quills are tipped with black; the legs are black; between the toes, a membrane, connected to the outer one as far as the second, and to the inner as far as the first joint.

This bird is found in various parts of the old Continent, as from the Ferro Isles near Iceland, to the Cape of Good Hope; it frequents the neighbourhood of the sea, and has been met with on the coast of France, at Sevenhuys near Leyden, and at times in England. It builds its nest on high trees near the sea side, laying three or four white eggs sprinkled with a few pale red spots, of the size of those of an Hen, is very noisy during breeding season like Rooks. Its food is fish, though it will also devour frogs and snakes, and, even grass and sea weeds. It is migratory, retiring to warmer climes as winter approaches.

5. LITTLE EGRET. *Ardea Garzetta*, Linn.

Size of a fowl; length near a foot, weight about one pound; bill black, irides pale yellow; the hind head crested; two of the feathers are near five inches in length, and narrow, hanging down behind in an elegant manner; between the bill and eye bare and green; the whole plumage is white, there are also on the back a set of long loose feathers, which cover and hang over the rump, the legs are greenish; claws black.

This species is almost a general inhabitant, being found in all the temperate and warm parts of the globe; formerly in plenty in England, as it appears from the bill of fare of Archbishop Nevil, that no less than one thousand were dressed at his feast. They are found in Asia, Africa, Isles of Madagascar and Bourbon, also in great plenty at Siam; In America they are met with at New York and Long Island; in some of the West India Islands, and at Cayenne. It is of the Heron tribe, and like them, frequents marshes and banks of streams, feeding on fish.

1. BITTERN. *Ardea Stellaris*, Linn.

Case No. 2.

This is an elegant species, somewhat less than the Heron, length about two feet six inches; the bill brown, beneath inclining to green; irides yellow; the feathers on the head long, and those of the neck loose and waving; the crown of the head black; the lower jaw on each side dusky; the plumage, in general, is beautifully variegated; the ground a ferruginous yellow, palest beneath, marked with numerous bars, streaks, and zigzag lines of black; the legs are pale green; claws long and slender; and the inner edge on the middle claw serrated.

This bird is not uncommon in our Islands, and in most of the temperate parts of the Continent; in Sweden it is said to migrate; frequents marshy places especially where reeds are plentiful, among which it makes its nest in April, which is chiefly composed of a bed of rushes. The female lays four or five eggs of a pale greenish ash colour, and the young are hatched in twenty-five days. It is very indolent, seldom stirring from its lurking place, unless disturbed during the day. In the evening after sun-set, it may be seen soaring aloft in a spiral ascent till out of sight, making a singular kind of noise; it has also another note like the bellowing of a Bull, which it uses in February, and ceases after the breeding season; this is always used when perched on the ground. It defends itself fiercely against dogs and men, and and is said to aim principally at the eyes of its foe. Its food is mice, frogs, and other reptiles, which it swallows whole, as well as small fish; is reckoned good eating.

2. COMMON HERON. *Ardea Major*, Linn.

This is a beautiful, tho' common species; the male weighs about 3½ lbs.; length three feet three inches; bill six inches long, colour dusky beneath, at the base yellowish; round the eye greenish, and bare of feathers; irrides yellow; forehead and crown white; sides of it over the eye black; all the feathers of the crown long, two in particular being eight inches in length; on the whole forming a most elegant crest; these are used as ornaments in the East, and bear a considerable price. The Heron's plume is also an appendage to a Knight of the Order of the Garter. The neck is white, the forepart marked with a double row of black spots; wing coverts bluish grey, outer edges of the wing white; bastard wing and greater quills black; middle of the back almost bare, covered by the scapulars which are grey and white, of a loose texture, long and narrow; the feathers of the lower part of the neck before are also of the same texture, and hang loose over the breast; on each side, under the wing, a bed of black feathers; breast and under parts white, legs dirty green; inner edge of the middle claw serrated,

This species is common in these kingdoms, frequents marshy places, and edges of streams where it may be seen standing motionless for hours together, waiting the passing of a fish, which it may snap up for food. In this interval the head is crouched between the shoulders, and the body resting on one leg. It will eat frogs, and at times feeds on vegetables. In flying it draws in

Saloon. the head between the shoulders, the legs hanging down. They build in the highest trees, in large societies, making their nests with a few rushes and Birds. wool or feathers. They lay from four to five eggs of a pale greenish blue colour. It is found in all countries both of the Old and New Continents.

Case 2. 3. GREATER PARADISE BIRD. *Paradisea Apoda*, Linn.

This species appears from the plumage to be as big as a pigeon, but the body scarce exceeds that of a Thrush. The length, from the end of the bill to that of the tail, is twelve inches and a half; the bill greenish yellow, and one inch and half long; the eyes very small; the head, (which is likewise small in proportion to the bird,) the throat, and neck, are covered with very short, dense, stiff feathers; those on the head and hind part of the neck are of a pale gold colour; the base of the bill is surrounded with black feathers, appearing like velvet, changing in different lights to green; the fore part of the neck is green gold; the lower part of the neck behind, the back, wings, and tail, are chesnut; breast deeper chesnut, verging to purple; from under the wings spring a great quantity of feathers, with the webs so loose as to appear like a herring bone, some of them are near eighteen inches in length; these are of different colours, some chesnut and purplish, others yellowish, and a few almost white; from the rump arise two feathers without webs, except for four inches next the base, and the same at the tips, these appear to be the two middle tail-feathers, and are the same colour as the rest of the tail, the feathers of which are six inches long, and even at the ends; the legs are stout, and of a brown colour.

They are natives of the Molucca Isles, and those surrounding New Guinea, particularly in the Isle of Aroo. The Amboynans call them Manu-key-aroo; the natives of Ternate, Burongpapua, or Papua Birds; also Manucodewata, and Soffu or Sioffu; at Aroo they are called Fanaan; are supposed to breed in New Guinea, coming from thence into Aroo at the westerly or dry monsoon, and returning when the easterly or wet monsoon sets in. They are taken with bird lime, or shot with blunt arrows; the true food of these birds is not known, some say they feed on the red berries of the Waringa tree, others on nutmegs, others large butterflies, and again, others aver they chase and devour small birds, which is not improbable, as their legs and bills are sufficiently stout; and they are known to defend themselves courageously, whenever they are taken alive.

It is for ornament only, that these birds are coveted by such of the inhabitants of the East as are able to purchase them, the Chiefs of the country wearing them constantly in their turbans. The Grandees of Persia, Surat, and the East Indies, use them as aigrettes, and even adorn their horses with them. Of late years they have been much coveted and worn as an ornament by the Ladies of this kingdom, a fine specimen often fetching as high a price as twenty guineas. No set of birds have given rise to more fables than this, as their never touching the ground from their birth to their death, living wholly on dew, being produced without legs, and an hundred such silly tales, too absurd to recite.

4. Two Specimens of the SMALLER HUMMING BIRD, one on its Nest.

This specimen is of the smallest species of the genus, which is very numerous, there being above 60 species of these elegant little birds; they are inhabitants of South America, West India Islands, and even North America. These birds subsist on the nectar or sweet juice of flowers, frequenting those most which have a long tube; particularly the *impatiens noli me tangere*, the monarda, with crimson flowers, and those of the convolvulus tribe: they never settle on the flower during the action of extracting the juice, but

flutter continually like bees, moving their wings very quick, and making a humming noise; whence their name. They are not very shy, permitting people to come within a foot or two of the place where they are, but on approaching nearer, fly off like an arrow out of a bow; they often meet and fight for the right to a flower, and this always on the wing. In this state they often enter a room where the windows happen to be open, fight a little, and again leave it. When they come to a flower which is juiceless, or on the point of withering, they pluck it off, as it were in anger. The use of the bill in most birds is to collect their food, but in the Humming Bird, it serves no other purpose than as a case of defence for the tongue, as it is by means of this that it gets its nourishment, which is ever in a liquid state, and which it draws up in the manner of the Elephant, by means of the proboscis or bifid tongue. In confinement, they always die in a few days, tho' fed with sugar and water.

Their nests are most frequently built on the middle of a branch of a tree, and the nest is so small, that it cannot be seen by a person who stands on the ground; it is for this reason that the nests are not more frequently found; it is quite round, the outside is composed of green moss, such as is common on old pales, trees, &c. the inside of soft down, collected from the leaves of the great mullein, or the silk grass, though it often varies in its texture by being formed of flax, cotton, hemp, hairs, or other soft materials. They lay two eggs of the size of a pea, which are white, and not bigger at one end than another. In the window on the right hand of the saloon, among the miscellaneous articles, is a fine specimen of the nest and eggs naturally affixed to a branch of a tree.

5. PARADISE TANAGER. *Tanagra Tatao*, Linn.

This extremely elegant bird is somewhat less than a Goldfinch, about six inches in length; bill black; the upper part and sides of the head yellowish green; the feathers small, and seen distinct from each other; the hind part of the head and neck, the upper part of the back and scapulars of a velvety black; the lower part of the back and rump of a bright fire colour, verging to orange towards the tail; the throat and fore part of the neck glossy violet blue; breast, belly, sides, and vent, sea green; thighs dull green; the lesser wing coverts green gold; the middle ones blue, and the greater violet blue; the quills black, with blue margins; the second quills, tail, and legs black. Young birds want the fiery colour on the lower part of the back, also the females, as in that part it is wholly of an orange colour, and in general, the whole plumage is less brilliant. The plumage also varies in the males as some of them are found of a bright red both on the back and rump, while others have those parts wholly of a golden yellow.

This most beautiful species is pretty common about the inhabited parts of Guiana, and appear in large flocks in the neighbourhood of Cayenne about the month of September, frequenting a particular large tree which is just then in flower, and as soon as the fruit sets, begins its depredations thereon. It generally stays about six weeks; then migrates, but returns again in April and May, at which time the fruit ripens. It is about this tree alone that it is found, for it frequents no others. They are frequently kept in cages, fed on bread and water, have no song, but only a short and shrill note.

6. GREAT TERN. *Sterna Hirundo*, Linn.

Length about 14 inches, breadth thirty, weighs about four ounces and a quarter; bill slender, two inches and a half long; the colour crimson, and pointed at the end, where it is black; the top of the head, taking in the eyes and nape, black, tapering to a point at the back part of the neck; between the nostrils and eye, sides under it, neck and all the under parts, pure white; the back and wings are of a fine pale ash colour; quills grey; two or three of

Saloon. Birds. Case 2.

the outer ones very dark; the shafts white; tail greatly forked, white except the outer web of the exterior feather, which is black; the legs are crimson, claws black.

This is a very common species, and frequents our sea coasts, and banks of lakes and rivers during the Summer, but most common in the neighbourhood of the sea; found also in various parts of Europe and Asia according to the Season. In the Summer, as far as Greenland and Spitsbergen, migrating in turn to the South of Austria and Greece. It lays three or four eggs about the month of June of a dull olive-colour, an inch and three quarters in length, marked with irregular black spots, intermixed with some others of a smaller size and less bright, the little end is almost free from any markings; these are laid among the grass or moss; the young are hatched in July, and quit the nest very soon after; they are carefully fed by their parents, and fly in about six weeks. This bird appears to have all the actions over the water which the Swallow has on land; skimming over the surface, and seizing on every insect which comes in its way; besides which, the moment it spies a fish in the water, it darts into that element, and seizing its prey, arises as quickly to the place it dipped from. It is a bold bird, not fearing mankind; and in the time of incubation will attack any one; frequently darting down so as to touch a person's hat, without his giving the least offence.

7. TURTLE DOVE, or COMMON TURTLE. *Columba Turtur*, Linn.

The length of this bird is above twelve inches; the bill is brown; the irrides yellow; the eyes surrounded with crimson; the top of the head cinereous olive; the forehead and chin nearly white; on each side of the neck is a patch of black feathers with white tips; the back is ash coloured, margined with reddish brown; scapulars and wing coverts reddish brown; each feather black in the middle; quills brown, with pale edges and tips; the fore part of the neck and breast vinaceous, but pale; the lower part of the breast and sides dusky gray; the belly, thighs, and vent white; the two middle feathers of the tail are brown; the others darker, tipped with white; and the outer one white on the outer edge; the legs reddish.

This bird is not uncommon in these kingdoms, and I believe is wholly migratory, none having been observed after the time of departure in Autumn; it arrives later and departs sooner than any of the pigeon tribe, and is very common in Kent in flocks of above twenty, frequenting the pea fields and doing much mischief. They build generally in the thick woods, on the highest trees; lay two eggs, and are supposed to breed but once in the season.

8. THE TOCO. *Le Toco*, Buffon.

The length of this bird is 9 or 10 inches from the head to the end of the tail; the bill is 7 inches and half long; the case of both mandibles black; the rest of the lower mandible reddish yellow quite to the end; the upper mandible is reddish yellow for two-thirds of its length, and from this to the end black; the head, upper part of the neck, back, rump, wings, the whole of the tail, the breast, and belly, are deep black; the upper tail coverts are white, the under of a fine red; the throat and fore part of the neck are white, with a little mixture of yellow; between this and the black on the breast is a small circle of red; the wings are short, not reaching to one-third of the tail; the legs and claws are black; inhabits Cayenne.

Case No. 3. 1. CRESTED CURASSOW. *Crax Alector*, Linn.

Size of a small turkey; length near three feet; the bill is an inch and three quarters long, of a dusky or horn colour, and covered from the middle with

a kind of cere or skin, which passes backwards quite round the eyes, and behind them; the general colour of the plumage is a full black; the feathers of the neck soft and velvety; on the top of the head stands a kind of upright crest, composed of twisted black feathers, the longest of them three inches, and others much shorter; the lowest part of the belly, vent, and thighs, are white; the tail is eleven inches long, and consists of fourteen feathers, a little rounded in shape, and black; the legs are strong, of a dusky or brown colour. Saloon. Birds. Case No. 3.

It varies in some specimens in having the belly barred with white; and the ends of the tail feathers of the same colour.

These are frequent at Guiana, and are called POWESE by the natives, from their cry. They are pretty numerous in the woods, and make no small part of the food of the planters, being supplied therewith by the Indian hunters; and their flesh is reckoned delicate, much like that of a turkey.

They are easily brought up tame, and are frequently found in the Dutch Settlements of Berbice, Essequebo, and Demerary. They are called at Brasil by the name of Curasso.

3. SCARLET IBIS. *Tantalus Ruber*, Linn.

Length twenty-one inches; bill between six and seven long, and of a pale red; eyes black; the base of the bill passes a little way back on the forehead; the sides of the head, quite beyond the eyes, are bare, and of a pale red; the whole plumage is of a glowing scarlet, except four of the outer prime quills, which are of a glossy blue black at the ends; the shafts of the quills and tail are white; legs pale red.

This beautiful species is met with in most parts of America within the Tropics, also pretty common in East Florida, and a few are seen in the South of Carolina; in some of the West India Islands in great plenty, especially the Bahamas. It generally frequents the borders of the sea, and sides of the neighbouring rivers, and lives on small fry of fish and insects, which it picks up when the sea retires from the shore. They frequently perch on trees in flocks, but lay their eggs on the ground on a bed of leaves; the eggs are of a greenish colour, the young when hatched are black, in a little time grey, but are nearly white before they are able to fly; from this they change to red by degrees, and about the third year are complete in their vivid red plumage.

4. ROCK MANAKIN, COCK of the ROCK. *Pipra Rupicola*, Linn.

Size of a small pigeon; length from ten to twelve inches; bill an inch and a quarter long, and of a yellowish colour; the head furnished with a double round crest; general colour of the plumage orange, inclining to saffron; the wing coverts loose and fringed; quills, part white, part brown; tail feathers twelve in number; the base half of the ten middle ones orange, from thence to the ends brown; the outer feathers brown, with the base half of the inner web orange; all of them fringed at the ends with the same; the upper tail coverts are very long, loosely webbed, and square at the ends; legs and claws yellow.

This beautiful species inhabits various parts of Surinam, Cayenne and Guiana in rocky situations; but is no where so frequent as in the mountain Luca, near the river Oyapoc, and in the mountain Courouaye, near the river Aprouack, where they build in the cavernous hollows, and the darkest recesses. They lay two round white eggs, the size of those of a pigeon, and make the nest of a few dry bits of sticks; are in general very shy, but have been frequently tamed, so as to run among the poultry. The female is wholly brown; except the under wing coverts, which are of a rufous orange; and the crest neither so complete nor rounded as in the male.

In Case No. 2, is preserved the Female, marked 9.

Saloon. Birds. Case No. 3.

5 CRESTED BOAT BILL. *Cancroma Cochlearia*, Linn.

Size of a fowl; length 22 inches, the bill is four inches long, and of a singular form, not unlike a boat with the keel uppermost, or as some authors have described it, like the bowls of two spoons placed with the hollow parts together; the upper mandible has a prominent ridge at the top, and on each side of this a long channel, at the bottom of which the nostrils are placed; these are oval, and situated obliquely; the general colour of the bill is dusky, or in some specimens dark brown; the skin between the under jaw capable of distension; from the hind head springs a long black crest, the feathers which compose it narrow, and end in a point; the middle ones are six inches in length, the others lessen by degrees, the outer ones being not more than one inch; between the bill and eye the skin is bare and dusky; the plumage white on the forehead; the rest of the bird of a pale bluish ash colour; across the lower part of the neck behind is a transverse band of brownish black, which passes forward on each side towards the breast, ending in a point, but does not encompass it; the fore part of the neck, and under parts are bluish white, except the belly and thighs, which are rufous; the feathers which hang over the breast are loose like those of the Heron; the tail is three inches and a half long, and the wings when closed, reach nearly to the end of it; the leg is three inches in length; and the thigh, from its insertion to the knee, four; the middle toe two inches and a half, the bare part above the knee one inch and a half, the colour of the bare parts yellowish brown; claws black; the toes are connected at the base by a membrane, which is deepest on the outer one.

Inhabits Cayenne, Guiana, and Brazil, chiefly frequents such parts as are near the water; in these places it perches on the trees which hang over the streams, and drops on the fish which may swim below; it is thought also to live on crabs, from whence the Linnean name, but this is not clearly ascertained, though it cannot be denied; yet we are certain that fish is its most common, if not the only food.

6. BLACK SKIMMER, or RAZOR BILL. *Rynchops Nigra*, Linn.

Size of the black Guillemot; length twenty inches; breadth three feet seven inches. The bill is of a singular structure, the upper mandible being above an inch shorter than the under, the last $4\frac{1}{2}$ inches in length; both mandibles are greatly compressed on the sides; the upper shuts into the under like a razor into its handle, and both of them very sharp on the edges; the base of the bill is red, the rest black, and on the sides of the under are several furrows; the forehead, chin, and all the under parts, are white; the rest of the head, and the upper parts of the body and wings, dusky black; across the wings a bar of white; the tail is much shorter than the wings, and forked in shape; the two middle feathers are black; the next on each side the same, margined outwardly with white; the four outer ones white, dashed with dusky down the shafts, least so on the outer feathers; legs weak and red; claws black.

The male and female both alike. Some birds are brown instead of black, and the white beneath less pure

This bird inhabits America from New York to Guiana, Cayenne and Surinam, and according to Ray, the East Indies also. It is commonly on the wing, and skims the surface of the water, continually dipping in its bill, to take up small fish, on which it principally feeds. In stormy weather seeks the shores, and lives on oysters and other shell fish, which the shape of the bill enables it to open. It is called at Madras, Coddel Cauka or Summoodra Cauky; at Guiana, Taya-Taya; and at New York, Skippog; by some Razor Bill.

7. RED HEADED GUINEA PARRAKEET, or GUINEA SPARROW. *Psittacus Pullarius*, Linn.

Saloon. Birds. Case No. 3.

Size of a Lark; length five inches and a half; the bill is red, with a pale tip; cere ash colour; orbits bare, and the same colour; irides bluish; general colour green, palest beneath; fore part of the head and throat red; ridge of the wing and the rump blue, but the upper tail coverts are green, upper part of the tail feathers red, beneath this is a narrow bar of black, and the tips are green; the two middle feathers wholly green; legs and claws grey. The female is marked much the same, but the colours not so strong; the red on the face much paler, and the ridge of the wing yellow.

These birds inhabit Guinea, where they are very common. They are also found in Ethiopia, the East Indies, and the Island of Java. They are remarkable for their affection to each other; for this reason they are generally kept caged in pairs, the male is very affectionate to the female, hulling the seeds for her with his bill, and presents them to her in that state, and appears unhappy at the smallest separation; her affection is reciprocal; if one is sick, the other is melancholy, and if death should follow, it is not often the other long survives. They are exported from Africa in great numbers, but not above one in ten survives the passage to Europe, though they often live many years after their arrival. They are chiefly kept for their external beauty and docility of manners, rather than any thing else; for they do not talk, and the noise they make is far from being agreeable.

8. HORNED SCREAMER. *Palamedea Cornuta*, Linn.

Size of a Turkey, length three feet 4 inches; bill $2\frac{1}{4}$ inches long, black, the upper mandible a little gibbous at the base, the under shutting beneath it as in the gallinaceous tribe; the nostrils oval and pervious, and placed near the middle of the bill; from the crown of the head springs a slender horn standing erect, (in this specimen more than three inches is broke off the length,) pointed at the end; the irides of the colour of gold; the plumage on the head, neck, and upper part of the body is black, margined with grey on the first, and downy; some of the feathers round the neck are likewise edged with the same; the under parts of the wings are pale rufous, appearing on the shoulders and edges of them, when closed; at the bend of the wing are two strong sharp, horny, yellow spurs, one above another, the uppermost an inch and a half in length; the belly, thighs and vent, are white; the tail $8\frac{1}{2}$ inches long, and black; the legs stout and dusky; the fore claws moderately bent; the hind one nearly straight, not unlike that of a Lark, and one inch in length.

They are always met with in pairs, and if one dies, the other mourns to death for the loss; they frequent places near the water, make a large nest of mud, in the shape of an oven upon the ground, and lay two eggs the size of a Goose's. This specimen was brought from Cayenne, and is the identical specimen from which Latham drew his description.

1. WHITE STORK. *Ardea Ciconia*, Linn.

Case No. 4.

Length three feet three inches; bill seven inches and three quarters; the colour of a fine red; the plumage is wholly white, except the orbits of the eyes, which are bare and blackish; some of the scapulars, the greater coverts and quills are black; the skin, legs, and bare parts of the thighs are red; male and female much alike.

This familiar species inhabits in turn the various parts of the old Continent, but avoids alike the extremes of heat and cold, being never met with between the Tropics, nor scarce ever seen more north than Sweden, nor in Russia beyond 50 degrees. It never frequents Siberia, though sometimes seen in

Saloon. Birds. Case No. 4

Bucharia, where it makes its nest; tending toward the south in autumn to winter in Egypt. In Holland they every where build on the tops of houses, where the inhabitants provide boxes for them to make their nests in, and are particularly careful that the young birds receive no injury, even resenting it as done to themselves.

The female makes a large nest, composed of sticks; and lays from two to four eggs, which are of a dirty yellowish white, the size of those of a Goose, but a little longer. The young are hatched in a month, and at first are brown; the male and female are said to watch them by turns, till they are fit to take care of themselves. The Stork sleeps on one leg, and snaps with its bill in a singular manner by turning the head backwards; the upper part of the bill placed on the rump, and the under, set into the quickest motion, made to act on the other. Their food consists of frogs, snakes, and other reptiles; hence the veneration of all sects for this useful bird, which frees them from all these pests; the flesh is reckoned not good food, as it is allowed on all hands to be very unsavoury.

2. SECRETARY VULTURE. *Falco Serpentarius*, Linn. —*Sagittarius*, Phil. Trans.

This is a most singular species, being particularly remarkable from the great length of its legs; which at first sight would induce one to think it belonged to the Waders; but the characters of the Vulture are so strongly marked throughout, as to leave no doubt to which class it belongs.

The bird when standing erect, is full three feet from the top of the head to the ground; the bill is black, sharp and crooked, like that of an Eagle; cere white; round the eyes bare of feathers, and of a deep yellow or orange colour; the irides pale grey; the upper eye-lid beset with strong bristles, like eye lashes; the head, neck, breast, and upper parts of the body, are of a bluish ash-colour; bastard wing, prime quills, vent, and thighs, black; in the last the feathers have white tips; tail rounded, brownish ash; the end for above an inch, black; the tip white; the two middle feathers the same in colour as the others, but double the length of any of them; most frequently these two feathers are wanting; the legs are very long, stouter than those of a Heron, and of a brown colour; claws shorter, but crooked, not very sharp, and of a black colour; from the hind head springs a number of long feathers, which hang loose behind, like a pendant crest; these feathers arise by pairs, and are longer as they are lower down on the neck; this crest the birds can erect or depress at pleasure; it is of a dark colour, almost black; the webs are equal on both sides, and rather curled; and the feathers when erected, somewhat incline towards the neck.

This singular species inhabits the internal parts of Africa, and is frequently seen at the Cape of Good Hope. It is also met with in the Philippine Islands.

As to the manners of this bird it is generally allowed that it principally feeds on rats, lizards, snakes, and the like; and that it will become familiar. It is called, at the Cape of Good Hope, SLANGEATER, i. e. SNAKE-EATER. A great peculiarity belongs to it, not observed in any other, which is the faculty of striking forward with its legs, never backwards. Dr. Solander informs us that he has seen one of these birds take up a snake, small tortoise, or such like in its claws, when, dashing it from thence against the ground with great violence, if the victim was not killed at first, it repeated the operation till that end was answered; after which it eat it up quietly.

3. POMPADOUR CHATTERER. *Ampelis Pompadora*, Linn.

Length seven inches and a half; bill brown; the plumage in general is of a

fine glossy purple; the lesser wing coverts the same; but the greater ones are narrow, long, and hollowed beneath, the upper surface appearing ridged, and the tips bare of webs; some of these are two inches in length, and hang in an elegant manner over the quills; the shafts of them are white; the quills are all white, except just the tips of some of the greater ones, which are brown; the legs are black. Inhabits Cayenne, Guiana, &c. and is a scarce bird. It derives its name from the famous MADAME POMPADOUR.

4. PAINTED PHEASANT, or GOLDEN PHEASANT. *Phasianus Pictus*, Linn.

This elegant bird is less than the common Pheasant; length 2 feet 9 inches and a half; bill and irides yellow; general colour of the plumage crimson; on the head is a most beautiful glossy yellow crest, the feathers of which appear like silk, and fall backwards; cheeks almost bare, and flesh coloured; the feathers of the hind head are orange coloured, square at the ends, and crossed with black lines; these are long, and can be erected at will, like those on the neck of the Cock; beneath these the feathers are green, very little rounded at the ends, and tipped with black; the back and rump are yellow; the upper tail coverts long, narrow, and crimson, and fall on each side of the tail; the wing coverts chesnut and brown mixed; scapulars blue; quills brown, marked with yellowish spots; the tail is long and cuneiform, the longest feather 23 inches, and the outer one very short, the colour chesnut and black beautifully variegated; the legs are yellow, and furnished with a spur a quarter of an inch in length.

The native place of this beautiful species is China, where it is called KINKI. It bears confinement well, and breeds easily in that state; the eggs are redder than those of the common Pheasant resembling somewhat the Guinea Fowl; the flavour of their flesh is said to exceed that of any other Pheasant.

5. RED-TAILED TROPIC BIRD. *Le Paille en queue à brins rouges*, Buffon's Ois. vol. 8, p. 357.

This bird is not mentioned by Linnæus. The length of this species is two feet ten inches, of which the two long tail feathers alone measure one foot nine; the bill is 3 inches and a half in length, and of a deep red; the plumage white, with a tinge of elegant pale rose colour; the crescent over the eye black, but somewhat abrupt in the middle; the ends of the scapulars marked with black; but what distinguishes the bird from others is the two middle long tail feathers, which are of a beautiful deep red their whole length, except the shafts and base, which are black; the sides over the thighs dusky; the legs black.

These birds are seldom seen on shore unless in the breeding season, but are frequently met at sea by our Navigators. Are in great plenty in the island of Mauritius, where they make their nest in hollows in the ground under the trees; the eggs are two in number, of a yellowish white marked with rufous spots; the Otaheiteans and natives of the Friendly Isles call them TAWAGGE and TOTIO.

6. YELLOW-THROATED TOUCAN. *Ramphastos Dicolorus*, Linn.

The length from the tip of the bill to the end of the tail is seventeen inches; bill near three inches and a quarter long, and one inch and half thick at the base; both mandibles bend downwards, and are black at the base, broadest at the lower mandible; the rest of the bill is olive green near black, the base inclines to yellow, as does the whole length; in the middle and upper end

Saloon. Birds. Case No. 4. the edges of both mandibles are red, and serrated, but not deeply; the nostrils are at the base of the bill hid in the feathers; the upper part of the head and body are greenish black; cheeks and throat brimstone; fore part of the neck orange, surrounded with brimstone; breast, upper part of the belly, the upper and under tail coverts, fine red; thighs greenish black; bottom of the belly and sides blackish; quills and tail of a greenish black; the last even at the end; legs and claws black.

Miscell. In the centre of the Saloon is placed a handsome Mahogany Cabinet, which contains part of the arrangement of Minerals, which will be noticed hereafter; on the top of the Cabinet are placed two elegant Glass Cases, divided into four compartments; containing in No. 1 and 2 a large and beautiful collection of JASPERS, AGATES, &c. cut and polished, principally from Germany and other parts on the Continent. Many of these elegant specimens are large blocks, and of great value.

No 3 and 4 contain various miscellaneous articles among which are a small collection of FOSSILS, collected at Dunbar, Pennycuik, and Thornlie Bank near this City, presented to the Museum by Captain LASKEY.

On the top are various articles placed under Bell Glasses, among which are two SEPULCHRAL URNS, one found in the Isle of Bute, presented by the Rev. JOHN ROBERTSON; the other found under a Cairn near Lady-Land House in Kilbirnie, Ayrshire, presented by WM. COCHRANE, Esq. These Urns are of unbaked earth, and similar in form and ornaments; they are vulgarly supposed to be Roman, but the writer rather believes them to be of the aboriginal workmanship of the natives, or probably of Pictish origin.

In the centre is an elegant TOY carved in Amber, a group of boys forming the pedestal, supporting a vase cup on their head; the Amber is of different colours, the foot being of the rich dark brown colour, the pedestal light yellow, and the cup orange.

On each side a magnificent specimen of AMBER, very translucid, one formed to the shape of a bottle, and from the light opposite, it has often been taken for a bottle of Oil; the other of a cake form, leafy within, or not pure.

On the right a beautiful ECHINUS with its purple spines.

On the left a fragment of ROCK CRYSTAL mounted on a pedestal, containing Ore of Titaneum, resembling straws.

A group of CRYSTALS in their native state from Dauphiny, and two TYMPANUMS of the Ear of a Whale.

APARTMENT ON LEFT OF THE SALOON.

Left Apartment. Miscell. This contains six large Glass Cases nearly the height of the room. In the centre is placed a handsome Mahogany Cabinet, on the top of which a large horizontal Glass Case, divided into four compartments, together with nine other small Cases, placed in the recesses of the windows, all of which are filled with the choicest specimens of NATURAL HISTORY, WORKS OF ART, &c. We shall commence our description with the Case on the left of the Room at the entrance.

Case No. 1. Glass Case, No. 1, contains a great variety of the smaller articles collected among the South Sea Islands, as fish hooks, fishing tackle, &c. The hooks are principally made of mother of pearl, bone, tortoise-shell, frequently in the shape of a fish, with small tufts of red feathers at the end, which serve as a bait or decoy.

Various lines of different degrees of strength and fineness, some of which are made of human hair plaited together. These are used chiefly for stringing ornamental articles on, to be worn round the neck, waist, arms, &c. as we shall hereafter notice. Some of these lines are made of the bark of the cloth tree, neatly and evenly twisted together, in the same manner, or near-

Saloon.

Left Apartment.

Miscell.

Case No. 1.

ly so as our twine or small cordage; another sort is of a softer nature, made of the bark of a small shrub, called Areemah by the natives, plaited together, and is flat; another kind is made of the plaited sinews of some sea animal, and is of great strength as well as beauty, and a striking proof of their laborious ingenuity.

No. 1, A BRACELET made of thin plates of tortoise-shell and ivory or bone interspersed, well polished, and fixed together by means of a string closely drawn through them.

No. 2, BREAST GORGET; this is an ornament in the form of the handle of a cup, made of wood, sometimes of ivory, bone or shell, which is hung about the neck by fine threads of twisted human hair, at times doubled an hundred fold.—Sandwich Islands.

No. 3, A KNIFE from the Friendly Islands, made of hard wood, elegantly carved and ornamented with the Iris ear shell, to represent eyes; it is edged with shark's teeth, and is used for common purposes; they use large knifes of the same materials, nearly a yard in length, for the purpose of cutting up their enemies taken in battle, which are always put to death, and trophies made of their bones.

No. 4, SMALL ORNAMENTS in ivory or bone, from the Sandwich Islands, worn by their women tied on their wrists.

No. 5, BOWL of Marble for playing with, Sandwich Islands. These are made of marble, slate, spar, &c. and are used in a game similar to our bowls.

No. 6, A singular formed FISH HOOK, from King George's Sound. It is rather difficult to comprehend on what principle the barbing of this hook acts.

No. 7, COMBS from Otaheite, which are specimens of their exquisite wicker work.

No. 8, A SLING for throwing stones with, from Sandwich Islands. The centre formed like a small craddle or hammock, is made either of the husk or rind of a young cocoa nut, or the leaves of the Pandanus tree, neatly tied, and fastened to a Pandanus line at each end; in this craddle the stone is placed. One end of the string having a bow, is fastened round the wrist, while the other end is held between the fingers and thumb, it is whirled round the head two or three times, then projected with great force, and a degree of nicety, as seldom to miss the mark, to the great surprise of our voyagers. The stone is formed of an ovate shape, and may be seen lying in the sling; it is of a species of steatite, or micaceous slate, and has never been observed to differ in its form or texture.

No. 9, BRACELETS of Boar's Tusks, laid parallel to each other, with the concave part outwards, the points cut off, fastened together by means of a string closely drawn through them.

No. 10, A BRACELET made of thin pieces or plates of ivory or bone, with similar plates of tortoise-shell interspersed, and well polished. Sandwich Islands.

No. 11, A small figure of a TURTLE in bone, from Sandwich Islands, worn by the women tied on their wrists.

No. 12, A NECKLACE of shells and berries from Friendly Islands.

No. 13, Several FISH DECOYS, formed of the upper parts of the cypræa, or cowry shells, fastened round an oval stone which forms the nucleus, and at the same time acts as a sinker for the hook. New Zealand, &c.

No. 14, Several specimens of the NEPHRITIC STONE, from Tovy Poenammoo, the southern division of New Zealand, which country takes its name from this stone, it is there called Poenammoo, or the Ear Drop Stone; these are formed into a variety of chissels and other tools. See Parkinson's Voyage round the World, page 93, 120, and 127; and Hawksworth's Voyage, vol. 2, p. 400.

No. 15, A MEAT HOOK made of the soft wood of the bread-fruit tree

Saloon. from Otaheite. It is used by the natives for suspending their meat, small baskets, or fishing tackle on.

Left Apartment. No. 16, Two Reed Pipes from New Zealand, used by the natives in their musical entertainments. The great analogy between these pipes, and the syrinx, or Pan's Pipe of the Ancients, as well as some other singular articles used by these natives, has given rise to many speculative theories respecting their origin.

Miscell.

Case No. 1. A variety of Spear Heads, Fish Hooks, Fishing Lines, from the various Islands in the Southern Ocean Vide the respective names attached to each article.

Case No. 2. Glass Case, No. 2. contains principally the admirable and curious articles collected during the voyages of Captains Cook, King, &c. in the South Seas, among which we shall first notice the Flaxen Mantles from Nootka, or King George's Sound, and New Zealand, some of which are ornamented with a deep fringe. These kind of garments pass under the left arm and tie over the right shoulder, by which means both arms are left at freedom These different mantles are made by people to whom the use of the loom is totally unknown. and who live at a vast distance from each other; notwithstanding which, there is so great a similitude in the workmanship, that, on comparing them together, and considering how improbable it is that the latter should ever have been peopled by the former, it naturally excites the idea, that invention is not peculiar to any nation or clime.

These flaxen garments with which they cover themselves, must necessarily engage their first attention and care, they are made of the bark of a pine tree, beaten into an hempen state; it is not spun, but after being properly prepared, is spread upon a stick, which is fastened across to two others that stand upright. It is disposed in such a manner, that the manufacturer who sits on her hams at this simple machine, knots it across with small plaited threads, at the distance of half an inch from each other; though by this method it be not so close or firm as cloth that is woven, the bunches between the knots make it sufficiently impervious to the air, by filling the interstices; and it has the additional advantage of being softer and more pliable.

Also a great number of specimens of Plain Cloth from Otaheite and other of the Friendly Isles. with Painted or Stained Cloth from the Sandwich, New Zealand, and Marquesas Isles. The Cloth is made of the inside bark of the Touta, or Cloth Tree of the Natives, the Morus Papyrifera, Paper Mulberry Tree of Botanists It is neither spun nor wove, but matted together somewhat in the manner our hats are made, by being beat for some time with an instrument of wood or bone, grooved on each side of different widths and depths, the coarsest being adapted for the first process of beating, and so on to the finest.—Specimens of this instrument may be seen in the Hall of the Elephant.—That which is intended to be painted is of a thick and stronger texture than that which is to remain plain, they paint them of a variety of patterns with a comprehensive regularity of design that bespeaks infinite taste and fancy. The exactness with which some of these intricate patterns are continued, is surprising, when we consider that they have no stamps, and that the whole is done by the eye, with pieces of bamboo cane dipped in some colouring mixture made of the juices of vegetables or berries. They rest their hand on another piece of cane in the same manner as our painters. The business of painting belongs entirely to the women, and is called Hipparree; and it is remarkable, that they always gave the same name to our writing, frequently taking the pen out of the hand of the sailors, to shew them that they knew the use of it as well as they did, but that our pens were not so good as theirs. They looked upon a sheet of written paper, as a piece of painted cloth, and it was not without the greatest difficulty that they could be made to understand that our figures had a meaning by which we could communicate our ideas one to another, without speaking.

From the five following articles which appertain to the very curious and

singular dress of a chief mourner at Owyhee; it is presumed the whole of the dress is here complete. It consists of Saloon.

No. 1. A large bunch of Feathers of the tail of the Tropic bird, these are worn on the head stuck in, in a radiated manner singly. Left Apartment.

No. 2. Three TAWMEES, or BREAST GORGETS. The ground work is of wicker work, covered and interwoven with feathers of the Poe bird, shark's teeth, and fringed with dog's hair, ornamented on each side at the top, sometimes with one, at others with two circular plates of the shell or nacre of the Black Pearl Oyster, or the beautiful Iris Ear Shell, encircled with Poe bird feathers; the whole forming a very elegant and singular ornament. Miscell. Case. No. 2.

No. 3. SMALL SLIPS of MOTHER of PEARL very ingeniously put together; a work of incredible labour when it is considered with what tools and instruments they were wrought with; this was suspended over the breast of the wearer.

No. 4. Various PIECES of UNWROUGHT CORDAGE of the Aouta tree which bound the under part of the dress together; and

No. 5. Several large strings of Feathers, tufted at the bottom also with feathers of the Poe bird; these were suspended from the wrists, and hung dangling when the arms were extended.

No. 6. STONE PESTLES, or BREAD-FRUIT POUNDERS from Otaheite; they are made of a kind of black basaltes, and are an astonishing effort of labour, executed by a people to whom the use of iron instruments at that time was unknown. The method of preparing the Bread-fruit for food is by pounding it on a block of wood with these Stone Pestles, occasionally sprinkling it with water, or the milk of the cocoa nut, which operation reduces it to a paste; it is then put into a vessel, and either made up alone or mixed with ripe plantains, bananas, or the sour paste which they call Mahie; at times they roast or bake it in an oven, which renders it soft, and something like a mealy potatoe.

No. 7. VEGETABLE BOTTLE, a species of Gourd. The description of these vegetable productions given by Captain KING is as follows: "The Gourd is applied to all manner of domestic uses, and the Sandwich Islanders, in order the better to fit them to their respective uses, have the ingenuity to give them different forms, by tying them with bandages during their early growth." Thus some are of a longitudinal form to hold fishing tackle; some round, to hold provisions; and others are in the shape of a bottle to hold water, &c. They have also a method of scoring them with a heated instrument, so as to give them the appearance of being painted, in a variety of neat and elegant designs.

No. 8. A BASKET, from Sandwich Islands, made of fine wicker work, ornamented with a species of Dentalia shells.

No. 9. KNEE or LEG ORNAMENT, worn by the dancers of New Zealand. The ground work is a strong close netting, on which are fastened several hundred small shells, which when put in motion, produce a rattling sound, to the music of which the dancers keep time; similar ones are fastened round the thighs and ancles.

No. 10, A POUCH, of curious workmanship, formed of bugles, feathers, and dog's hair, worn by men of high rank in New Zealand.

No. 11. A large specimen of the INNER BARK of the LAGETTO TREE from the West Indies, the curious texture of which resembles Gauze. King Charles II. (it is said) had a pair of ruffles, a cravat and frill made from this species of bark, which were presented to him by a West India merchant, which he wore at Court several times. The cloth of the South Sea Islands is made from a similar bark.

No. 12. A BOOT of elegant workmanship from the neighbourhood of Hudson's Bay, or Esquimeaux Country. It is formed of leather (said to be tanned with blood) ornamented in a singular manner with tassels of hoofs of a small species of animal, hair, feathers, and the fangs of dogs; the whole

Saloon. curiously embroidered with the quills of the porcupine dyed of various colours.
——— The writer does not recollect having seen a similar specimen.

Left Apartment. No. 13. A singular SPUR, formed of two pieces of Bamboo wood and thongs of leather; the country unknown, probably Mexico.

——— No. 14. A THIGH ORNAMENT, similar in its form and texture to the specimen marked No. 9. only instead of shells this is ornamented with seeds re-

Miscell. sembling a small purple bean; it is used for the same purpose also; from

——— New Zealand.

Case No. 2. No. 15. A SMALL BELT for the waist, formed of parts of the Dentalia shell, interwoven with a netting of cordage; from Sandwich Islands.

No. 16. A singular ROUND ORNAMENT, formed of a kind of wicker work, in which is fixed Dentalia shells, a dog's tooth in the centre, and the whole interwoven with red feathers of the Sandwich Creeper; from same country.

Case No. 3. Glass Case No. 3. See FOSSILS.

Case No. 4. Glass Case No. 4. contains a variety of Antediluvian remains, as Shells, Wood, Echini, &c. among those are,—

No. 1. The NAUTILUS, or SAILOR SHELL, from Sheppey Island, the pearly nacre of which still remains.

No. 2. A DISSECTED SPECIMEN, elucidating the internal structure of this curious Fossil; some of the chambers are beautifully saturated with pyritical matter.

No. 3. Various specimens of the CORNU AMMONIS SHELLS, more commonly known by the name of SNAKE STONES. These are found in almost all parts of the habitable globe, on the highest mountains and in the lowest valleys, though at present not a single vestige of them remains in a recent state. As a proof they belong to the family of shells, they are frequently found with the pearly shell adhering, and at times retaining the brilliant vivid hue of the nacre in all its radiance.

No. 4. Dissected Specimens of the AMMONE, shewing the concamerated chambers;—SIPHUNCULUS, beautifully incrested with sparry crystals.

The under compartment contains a large variety of FOSSIL ECHINI, or ANTEDILUVIAN URCHINS, or SEA EGGS, of various species, principally from St. Peter's Mount, Maestricht, and the chalk pits of England; many of these specimens are flint.

FOSSILIZED WOOD in sand stone, found in a quarry near Glasgow.

Another Specimen, found in digging the Ardrossan Canal.

Case No. 5. Glass Case No. 5. Contains an immense quantity of REPTILES, FISH, INSECTS, &c. in spirits; a few of the most remarkable are,

Nat. Hist. No. 1. The GREAT MANTIS, (*Mantis Gigas*, Linn.) The imagination can hardly figure to itself a more singular insect than this is; and had we only the account of authors, without having seen the animal, we might be inclined to question the truth of its existence. In its full winged or perfect state it is rarely met with in collections, the writer only recollects one specimen in the late Leverian Museum, which fetched the high price of twelve guineas. In this specimen the rudiments of the wings are just visible. In this state it is named among Naturalists the WALKING STICK. It is a native of Amboyna. A. A. younger specimens before the wings appear.

No. 2. TARANTULA SPIDER, (*Aranea Tarantula,*) Linn. Curious anecdotes are told of the effects that the poison of this Spider has on those who have the misfortune to be bitten by it. Dr. Mead says, although the bite at first is no greater than the sting of the Bee, yet the part is shortly discoloured, and the patient in a few hours, is seized with sickness, tremors, and a weakness in his head; he grows melancholy, stupid, and timorous, and in a short time expires, unless music is called to his assistance, which alone, without the help of medicine, performs the cure; for at the sound of the instrument, he sets to dancing, and continues the arduous exercise until he falls to the ground from whence he is conveyed to bed, where he refreshes himself from the fa-

tigue, repeating the exercise for days together until cured. Notwithstanding the great authorities which can be referred to, of music curing the Tarantula frenzy, there is good reason to believe the whole story fabulous, and a vulgar error; for it is treated as such by an Italian Physician in the Philosophical Transactions, and by a great many Gentlemen of veracity, who have resided at Taranto during the time in which the bite of the Tarantula is said to be most pernicious, who affirm, that there was not a Physician in the country who believed there was ever such a distemper from such a cause. We have been the more particular in this description, wishing to correct the vulgar errors, whenever they occur, that have crept into the science of Natural History.

Saloon. Left Apartment. Nat. Hist. Case No. 5.

No. 3. Several specimens of the GREAT SCOLOPENDRÆ, or CENTIPEDES, (*Scolopendra Morsitans*, Linn.) Inhabitants of China, East and West Indies, Africa, &c. The bite of these animals is very troublesome, but not poisonous, as has been asserted by some travellers.

No. 4. BIRD-CATCHING SPIDER, (*Aranea Avicularia*, Linn.) It resides amongst the trees, and seizes on small birds (particularly Humming Birds) which it destroys by sucking their blood, after having first wounded them by its fangs. This Spider has eight eyes, which are disposed somewhat in the form of an oblong square; two are perfectly round, the others are of an oval shape. Native of Surinam.

No. 5. GREAT SCORPION, (*Scorpia Afer*, Linn.) The largest of the species; a native of Africa. The sting of this animal is highly malignant and poisonous; it is armed in front with strong claws resembling those of some species of Crab; but the poisonous sting is inflicted by the point of the tail, in which may be observed the reservoir for supplying it with the fatal fluid, and the minute holes on each side of the sting through which it is injected into the wound.

No. 6. COMMON SCORPION, (*Scorpio Europæus*, Linn.) These are principally found in the West Indies and the Southern parts of Europe, and are very troublesome to the natives.

No. 7. SEA-HORSE FISH, (*Syngnathus Hippocampus*, Linn.) Native of the Mediterranean, Northern and Atlantic Seas. At Sicily, Malta, and other parts of the Mediterranean coast, these are used by nurses, under the idea of their producing a larger quantity of milk. The Hippocampus is a fish of a highly singular appearance; in its dry or contracted state, exhibiting the fancied resemblance from which it takes its name; but when alive, this appearance is somewhat less striking, the head and tail being carried nearly straight.

No. 8. REMORA, or SUCKING-FISH, (*Echeneis Remora*, Linn.) This fish has the power of adhering to whatever it sticks against, in the same manner as a Cupping-Glass adheres to the human body. It is by a similar apparatus that this singular fish sticks fast to the body of the Shark, drains away its moisture, and produces a gradual decay. It is found principally in the Mediterranean and Atlantic Seas, and has been found nearly of the length of eighteen inches.

No. 9. PRAYING MANTIS, (*Mantis Oratoria*, Linn.) or HOTTENTOT'S GUIDE. Many of the species of Mantis, and this in particular, are held sacred by the natives of the country they inhabit. From the singular manner in which this insect raises the upper part of the body and fore legs, it is supposed to point out the way to travellers that have lost their road, from whence the vulgar name of Hottentot Guide.

No. 10. GREAT LOCUST, (*Gryllus Giganteus*, Linn.) The largest of the species.

No. 11. The GREAT BULL FROG OF AMERICA, (*Rana Maxima*, Linn.) This is the largest of the species, and of a formidable appearance, though perfectly harmless.—N. B. This Case also contains many specimens belonging to this genus.

Saloon.

No. 12. The STRIPED CHÆTODON, (*Chætodon Striatus*, Linn.) This fish is a native of the Indian and American Seas.

Left Apartment.

No. 13. LONG-FINNED CHÆTODON, (*Chætodon Teira*, Linn.) This curious fish is a native of the Indian and Arabian Seas, and is reported to arrive at a considerable size.

Nat. Hist.

Case No. 5.

No. 14. HARLEQUIN ANGLER, (*Lophius Histrio*, Linn.) This species is a native of the Indian and American Seas, growing to the length of 10 or 12 inches, and in manner resembles the European Angler. Monsieur Renard in his History of Fishes affirms that he knew an instance of one of this species, kept for three days out of water, and which walked about the house in the manner of a dog.

No. 15. SLENDER FISTULARIA, or TOBACCO-PIPE FISH, (*Fistularia Tabacaria*, Linn.) This very remarkable fish is a native of the American Seas, and subsists on the smaller fishes, sea insects and worms.

No. 16. HARE-MOUTH GLOBE FISH, (*Tetrodon Lagocephalus*, Linn.) This genus like the Diodon has the power of inflating its body at pleasure. Is an inhabitant of the Indian and American Seas, but occasionally strays into the Northern latitudes, and has been taken, according to Pennant, about the British coasts near Penzance in Cornwall. The writer has once met with it on the coast of Devon.

No. 17. HORNED TRUNK FISH, (*Ostracion Cornutus*, Linn.) A singular formed fish, being triangular, armed with four strong bony spines, one over each eye, the other two near the anal fin.

No. 18. APHRODITA ACULEATA, (*Sea Mouse.*) This singular and beautiful animal is a native of our own shores, and frequently found on the coast, left dry on the sands; the Cod fish feeds on them.

No. 19. THE CHAMÆLION, (*Lacerta Chamælion*, Linn.) Few animals have been more noticed or universally known than the Chamælion, from the supposed idea that it can live on air, and possesses the power of changing its colour, and assimulating it at pleasure to any particular object or situation which it might be opposed to. This, however, must be received with great limitations. Though it is true that it can support a long abstinence, without apparently feeling the want of nourishment, its natural food consists of flies and other small insects, for which purpose the structure of the tongue is admirably adapted, consisting of a long missile body, furnished with a dilated and somewhat tubular tip, by means of which the animal seizes insects with great ease by darting it out, and retracting it instantaneously with the prey secured at the tip. As to its change of colour, the author of this could never perceive it to do so, to that degree which some Naturalists affirm, having kept one alive for a long time, and from which principally these observations are drawn. That it does vary its colours at times, according to the circumstances of health, temperature of the weather and other causes, cannot be denied; but these changes consist only in a sort of alteration of shades from the natural greenish or bluish grey of the skin into pale yellowish, with irregular spots or patches of dull red, which is all the changes that could be observed, though various experiments were frequently tried. Is a native of various parts of the world, as India, Africa, Spain and Portugal, and is a harmless inoffensive animal.

No. 20. GREEN LIZARD, (*Lacerta Agilis*, Linn.) This species is found in all parts of Europe, frequenting gardens, warm walls, and buildings; it is an active little animal, pursuing with great quickness its insect prey. It may be tamed in a certain degree, and soon becomes familiar.

No 21. DOUBLE-TAILED LIZARD, (*Lacerta Agilis Var*, Linn.) This Lizard is not properly ascertained, but supposed to be a variety of the common Green Lizard.

No 22. AZURE LIZARD, (*Lacerta Azurea*, Linn.) a beautiful little animal, inhabiting South America and Africa.

Saloon.

No. 23. Two specimens of the FLYING DRAGON, (*Draco Volans*, Linn.) or FLYING LIZARD. This very singular species of Lizard is a native of Asia and Africa. It is about eight or nine inches in length, furnished with large expansible wings like membranes, which enable it to spring to a considerable distance in quest of its prey. It has a gullet or pouch under the throat of a singular appearance, and is altogether different from every other creature. Dr. Shaw in his Nat. Mis. says, "it conveys to the mass of mankind the idea of some formidable monster, and recalls to the imagination the wild fictions of romance and poetry; but the animal distinguished by that title is a small harmless Lizard."

Left Apartment. Nat. Hist. Case No. 5.

No. 24. Several specimens of the MANTIS CRAB, (*Cancer Mantis*, Linn.) This very curious and singular crab is found in the Chinese seas and the Indian Ocean. A smaller species occasionally occurs on the English coast, supposed a variety.

No. 25. Several specimens of the CUTTLE FISH, (*Sepia Loligo*, Linn.) These singular animals pursue the track of the herrings, and at times are found in great quantities on our coasts. They devour the herring fry, and are very destructive to them. They drive them to the surface, then seize them in their beak, which is formed nearly like a parrot's bill, at the same time encircling them within their gelatinous processes surrounding the mouth. The vulgar call them Ink fish, from a black fluid which the animal possesses within its body, which it uses in time of danger, by squirting it out, occasioning the water around it to become turbid, by which means it escapes. Ladies frequently preserve this liquor, and use it as a marking ink, its stain on linen being indelible. It possesses only one bone of a gristly nature, which it is said the inhabitants of the Mediterranean prepare, and eat as a delicate food.

No. 26. ALCYONIUM FICUS, Sea Grapes. A very singular and curious marine production, from St. Christopher's.

No. 27. The STOAT or ERMINE, (*Mustela Erminea*, Linn.) It is found principally in the wilds of Russia and other cold countries. It is from the skin of this little animal that the valuable white fur is made; they are said to change their colour, being brown in summer and white in winter.

No. 28. The AGOUTI, (preserved in spirits) (*Cavia Aguti*, Linn.) The Agouti, or long-nosed Cavy, is about the size of a small hare; its nose is long, upper lip divided; body thin, sleek and shining, of a brown colour mixed with red; tail short; legs slender and almost naked; has four toes on the fore, and three on the hind foot; grunts like a pig, sits on its hind legs and feeds itself with its paws; and when satieted with food, it conceals the remainder. It eats fruits, roots, nuts, and almost every kind of vegetable; is hunted with dogs; runs fast, and its motions are like those of a hare. Its flesh which resembles that of a rabbit, is eaten by the inhabitants of South America.

Great numbers of them are found in Guiana and Brazil. They live in woods, hedges, and hollow trees.

If taken when young it is easily tamed, and will go out and return of its own accord. It delights in cutting or gnawing every thing with its teeth. When irritated, the hair of its back rises, it strikes the ground with its hind feet, and at the same time makes a noise like the grunting of a pig.

No. 29. The SILKY MONKEY, (*Simia Rosalia*, Linn.) Is by some called the Lion Monkey, from the quantity of hair which surrounds its face, falling backwards like a mane; its tail is also bushy, or tufted like a bird; its face is flat, and of a dull purple colour; its hair long, bright and silky; it is of a pale yellow colour on the body; the hair round the face is of a bright bay, inclining to red; its hands and feet are without hair, and of the same colour as the face; the body is about ten inches long, tail thirteen.

This little creature is a native of Guiana, is very gentle and lively, and seems to be more hardy than the other Sagoins. Buffon says that one of them lived at Paris several years, with no other precaution than keeping it

Saloon. in a warm room during winter. We have had several in our possession, and
——— though kept with the greatest care, always in cotton, and near the fire,
Left Apart- could never keep them alive above ten days or a fortnight after their arrival
ment. in the west of England.

——— No. 30. A fine specimen of the TARSIER. See description in right hand room.

Nat. Hist. No. 31. A young specimen of the PORCUPINE FISH, (*Diodon Hystrix*, Linn.)
——— This fish is commonly termed the Sea Porcupine, and is said to afford great a-
Case No. 5. musement when taken. After seizing the bait and finding itself hooked it exhibits every appearance of rage, inflating its body, elevating its spines to the highest degree, endeavouring to wound in all directions, and springing to some height out of the water, till after having tired itself by its vain efforts, it expels the air and becomes flaccid; but on being drawn near the shore, redoubles its rage, when it is left on the sand to die, it being impossible to touch it without danger till it is dead; it is a native of the Indian and American Seas, seldom eaten, being a coarse fish.

No. 32. FROG FISH, or ANGLER, (*Lophius Europæus*, Linn.) This fish is remarkable for its uncouth appearance. It is observed to frequent shallow parts of the sea, lying in ambush, covering itself with the weeds and mud in such a manner, that nothing is to be perceived but its tentaculæ, or long processes on the head, which it moves about in every direction; the smaller fish by this means are deceived by their resemblance to worms, and attempting to seize them, become the prey of the Angler.

No. 33. Two specimens of MONSTROUS CHICKEN, each with four legs.

No. 34. A fine specimen of the PURPLE CREEPER, in spirits.

No. 35. Several bottles containing a complete suite of the various transformations of the SILK WORM, from the egg to the winged state.

No. 36. A fine suite of the COMMON OYSTER, in various states, beautifully injected, displaying the situation of the heart, blood vessels, &c. &c. Also of the PECTEN MAXIMUS, or common Escallop.

No. 37. A dissection of a PEAR, shewing the beautiful ramifications of the ligneous fibres when divested of its pulp.

No. 38. Several CASHEW APPLES, with the nuts attached.

No. 39. Eggs of the common ENGLISH VIPER, with a young one coiled up in the position as lying in the egg.

No. 40. The MOLE CRICKET, (*Gryllus Grillotalpa.*) This singular little insect is of a dark brown colour, and little more than two inches in length; its body is scaly; furnished with two long pointed wings, and as many hairy tails; the most remarkable part about it, however is its fore feet, which bear some faint resemblance to a human hand, and are admirably adapted for forming those subterraneous excavations wherein the animal resides and deposits its eggs. With its strong webbed and slightly incurvated paws, the Mole Cricket works at a prodigious rate, and will burrow its way through a whole ridge of leguminous plants (of the roots of which it is very fond) in the course of a single night. With these instruments also it forms its neat habitation, (which is a room about the size of a Hen's egg) with various winding passages and curious approaches to it. This domicilium is generally, in the summer time, placed within six inches of the surface of the ground, and herein the female lays her eggs from 100 to 150. Towards winter, instinct, ever faithful to its office, informs the little being, that in order to secure his tender offspring, he must get deeper into the soil, and retire from the influence of the cold and frost; again he sets to work, and in a short time completes a commodious hybernaculem about 14 inches below the surface, hither he retires with his family, and patiently waits for the return of genial suns and warmer seasons, when he again takes possession of his summer abode.

The chief food of the Mole Cricket is roots and vegetables, for which he sometimes travels at night by the assistance of his wings to a considerable distance; before morning, he returns to his subterraneous habitation; and

strange to relate, is found to be employed there during the day, chiefly in ruminating or chewing the cud It is an inhabitant of England, &c. Saloon.

Glass Case No. 6. contains on the upper shelves a variety of CORALS, GORGONIAS, and SPONGES. On the lower shelves are preserved in spirits, a vast variety of the genus COLUBER, BOA, AMPHISBÆNA, and other reptiles, forming as large and beautiful an assemblage as may be met with in this country; a few of which we shall specify. Left Apartment. Nat. Hist.

No. 1. RATTLE-SNAKE. (*Crotalus Horridus*, Linn.) Is one of the most poisonous of reptiles, and the largest of the serpent tribe that inhabit North America. A peculiar distinction, and in which it differs from all other of its species, is the rattle at the end of the tail, with which it makes so loud a noise when in motion, that its approach may be known, and danger avoided. It is asserted that this serpent has the power of charming or fascinating small animals within its reach, which it devours. Squirrels and small birds are its principal prey, and no sooner do they spy the snake, than they skip from bough to bough, and approach by degrees nearer to the enemy, until they enter in a manner wilfully the extended jaws that are open to devour them. Bartram observes, that some Indian nations, never kill the Rattle-Snake, alledging their motive, that it would influence its living kindred to revenge the injury or violence done to it when alive. The flesh of the Rattle-Snake is said to be much relished by the natives, and even by Europeans; of late years they, as well as other serpents, are much decreased in the States, owing to the great number of hogs kept by the planters, who rove through the woods and devour them with avidity. Case No. 6.

No. 2. SPECKLED VIPER. (*Coluber Maculatus*, Linn.) Gmelin in his Syst. Nat. ed. 1. considers this species as a-kin to the Neapolitan Viper; the head is compressed at the sides, which are white, while the upper part is ash coloured, like the rest of the body, having a pale brown line on each side, which unite before the nostrils. Country unknown.

No. 3. CHAIN VIPER (*Coluber Getulus*, Linn.) Catesby has figured this species which he found in Carolina, and which was afterwards transmitted to Linnæus by Dr. Garden. The upper parts of the body are dark blue, almost black, having very narrow transverse bars, composed of small spots, which gives them a resemblance to chains. The under parts are dark blue, with small yellow spots, which are almost square.

No. 4. Long Green BORNEO SNAKE of Petivers, Gazoph. t. 100. f. 5. the BORGA of Buffon, by Lacepede; and (*C. Abetula*, Linn.) This species is remarkably beautiful, combining the richest colours of the finest gems, with the splendour of burnished gold, mingled with dark brown shades, which contrast and heighten its brilliant ornaments. Among serpents it may be said to hold the same rank, in these respects, with the Humming Bird among the birds. To see the Borga in all its splendour, we must take it in all the reflected tints of silver colour, golden yellow, red, blue, green and black, mingled and changing in the most extraordinary and beautiful manner possible, so that when about to change its skin, it seems studded with a mixed assemblage of all the precious stones, under a thin transparent veil of bluish crystal. It is one of the most slender of serpents in proportion to its length. It can spring to a considerable distance with great swiftness; it feeds on small birds, by concealing itself under the foliage of the trees, and is said to attract them by a peculiar kind of whistling, to which Seba, in his description of his Museum, has given the name of song. This is doubtful, as its long divided tongue and the conformation of its other organs of sound, are only adapted for producing a hiss or species of simple whistle. In the Isle of Borneo, the children play with the Borga without the smallest dread, they carry it in their hands, as innocent as themselves, and twist it about their necks, arms, and bodies, in a thousand directions. We have to regret that this most elegant and beautiful of the species, should require a degree of heat greatly

Saloon.

superior to that of our regions, and that only in those situations near the tropics, their splendour and beauty, as now described, can be observed.

Left Apartment.

Nat. Hist.

Case No. 6.

No. 5. CROTALUS DRYINUS, one of the species belonging to the genus of Rattle-Snakes. We need not therefore repeat what already has been detailed at large on this subject in No. 1, as most of this genus possess nearly the same habitudes. The Dryinas is whitish, with pale yellow spots. The top of the head has two scales considerably larger than the rest; the back scales are oval and ridged; the belly has usually one hundred and sixty-five plates, and the under surface of the tail thirty; it is found in America.

No. 6. CYLINDRICAL SNAKE, (*Anguis Scytale*, Linn.) This species is very common both in India and America, but is never found in the cold, or even in the temperate latitudes. its head which is somewhat convex above, and concave underneath, is hardly distinguishable from the rest of the body, except by three scales on its upper part, a little longer than the rest. The teeth are numerous, and, being all equal in size, and having no poison fangs we may conclude that it is not venomous. The scales over the whole body are whitish, with rusty brown edges, which form brown circular bars. The full size of this snake is not completely ascertained, but supposed not to exceed two or three feet in length, and half an inch diameter.

No. 7. LACERTA, or LIZARD-LIKE VIPER. (*C. Saurita*, Linn.) This species has a good deal of resemblance to the grey and green Lizards, both in its colours and in agility of motion, from which circumstance the trivial name is derived; its body is slender, and elegantly proportioned; of a dark brown colour, with three longitudinal white or green stripes extending from the head to the tail; the belly is white, having an hundred and fifty-six plates; and the tail has an hundred and twenty-one pairs of small plates; it is a native of Carolina; the jaws have no poison fangs.

No. 8. WHITE AMPHISBÆNA, (*Amph. Alba.* Linn.) The specific name is derived from its colour, in contradistinction to the Sooty or Black Amphisbæna. It grows usually to the length of one or two feet, of which the tail never exceeds an inch or inch and quarter. The eyes are extremely small, and covered in such a manner by a membrane as to be hardly perceptible, from which the Amphisbæna, like the snake has been called the blind serpent. The top of the head is covered by six large scales, in three rows of two each. The body has usually two hundred and twenty-three rings, and the tail sixteen rings; the upper edge of the vent has eight perforated tubercles, and contains each the excretory ducts of small glandular bodies under the skin; the muzzle, before the eyes, becomes considerably narrower than the upper part of the head, and ends obtusely. Is a native of America. This singular genus, differs essentially from all other serpents. Those which belong to it are not above five, as the SOOTY AMPHISBÆNA, (*Amph. Fuliginosa*, Linn.) VARIEGATED AMPHISBÆNA, (*Amph. Varia*, Linn.) YELLOW AMPHISBÆNA, (*Amph. Flava*, Linn.) MAGNIFICENT AMPHISBÆNA, (*Amph. Magnifica.* Linn.) and the one above described. They are very easily distinguished, by being entirely covered by scales of an almost square form, more or less regular, which are arranged in regular transverse rings, surrounding the whole body and tail. The scales in these rings join together at their sides. The upper and under surfaces of the body, or the back and belly, are so exactly alike, that, when the head and vent are concealed, it is impossible to say whether the animal is in its natural posture or turned on its back. Were it not for the situation of the head, and that the spine is nearer the back than the belly, it might be supposed they could crawl with equal ease on the back as on the belly; from the structure of these scaly rings, they have great liberty in turning and twisting their bodies in all directions. From it likewise they are enabled to crawl with almost equal ease and quickness backwards, as they can forwards; and from this circumstance they derive the name of Amphisbæna, which signifies advancing both ways.

Minerals.

In the centre of this apartment is placed a handsome double mahogany Cabinet, with horizontal Glass Cases on the top, containing in four compartments

various MINERALS, among which may be seen in compartment 1, the ORE of PLATINA, or WHITE GOLD;—a fine specimen of NATIVE FOLIATED GOLD;—NATIVE SILVER in a large mass;—Silver in its different combinations with other metals;—NATIVE COPPER in an arborescent and compact form;—MALACHITE COPPER ORE from Siberia;—COPPER ORE from China;—COPPER AZURE, very rare;—a fine mass of BLACK IRON HÆMATITES, very beautiful;—various specimens of crystalized WHITE LEAD ORE, one beautifully tinged with green, in delicate crystals, from the Brisgaw;—two singular crystalizations of PYRITES, &c. &c. Saloon. Left Apartment. Minerals. Centre Cabinet.

Compartment No. 2, contains a large slab of common FLINT above twelve inches in length, on which appear dendritic delineations pervading the whole mass, and passing quite through; the specimen is varnished to shew more distinctly the dendrites;—ASBESTOS, and AMIANTHUS in various states. This mineral, from its flexibility, and its resisting the effects of fire, is said to have been by the ancients, wove into a kind of cloth (a specimen of which is preserved in this Case,) in which they wrapped the bodies of persons of distinction before they were placed on the funeral pile, that their ashes might be collected free from admixture; it was also used for incombustible wicks, but is in modern days only considered as an object of curiosity. COMPACT GREY ANTIMONY ORE from Freyberg;—and RADIATED GREY ANTIMONY ORE from Bayruth;—several specimens of SERPENTINE, or JAD STONE from Sandwich Islands and New Zealand;—these are formed and used as hand-axes, chissels, and ornaments by the natives. Polished specimens of GREEN STONE, &c. &c.

Compartment No. 3, contains several fine specimens of DENDRITES in laminated slate from Papenheim.

GREEN CLAY SLATE with large brilliant cubic marcasites plentifully embedded on the surface. This specimen is supposed to have been found in Scotland.

Several beautiful specimens of CALC SINTER BLENDE; a large ARROW-HEAD SELENITE from the gypsum quarries in France; and various other Minerals, the names of which are attached to the specimens.

The 4th Compartment contains a fine specimen of CALC SINTER, more generally known by the name of FLOS FERRI. This is the corralloidal variety of Calc Sinter, it is generally found in veins of sparry iron stone. Dr. Jamieson says, from its peculiar external shape, and its occurrence in drusy cavities, he is inclined to think it ought perhaps to be considered, either as a group of crystalline shoots, or as an aggregation of crystals, than as stalactitic. From Switzerland.

A curious specimen of GYPSUM, which crystalized in the wood pipes which carry the salt water springs in Hungary.

Several specimens cut and polished of FLUOR SPAR from Derbyshire, where a manufactory is established for forming this beautiful spar into vases, obelisks, and other ornamental and useful works.

ARROW-HEAD and other SELENITES from France.

Straight lamellar HEAVY SPAR, combined with lead glance; a singular and beautiful specimen.

RHOMBOIDAL CALC SPAR from Iceland, commonly known by the name of Double Refracting Spar. This spar possesses the singularity that by viewing a line drawn by the pen on the opposite side it appears double, or two lines; Brochant says, it is occasioned by splitting double six-sided pyramids.

Several fine specimens of the PLUMB-PUDDING STONE, from Hertfordshire. These are a congeries of pebbles naturally cemented in one mass, by a siliceous matter, and are peculiar to this county. They are distinguished by the colour of the cement, or ground, as white, yellow, red, &c. The red is the scarcest variety.

On the top of the Cabinet are placed eight specimens of rare and valuable ETRUSCAN WARE, under bell glasses and stands, among which are two Lamps

Saloon.

with handles. These antiques were dug up at the foot of the Mont Campania in Italy, and are supposed to have been the household utensils of the ancient Greeks. Also a Roman Lamp in baked earth.

Left Apartment.

In the Cabinets in this room are preserved the HERBARIUM, consisting of many thousand plants all uniformly spread on paper, and in good order. Many of which are very rare.

Nat. Hist.

On each side of the window, in spirits are several curious specimens of the animal and reptile tribe, among these is a fine specimen of the BOA SNAKE. Marked A. This serpent being previously described, we have only to remark that this is a young one, and a male.

Marked B. LEPAS ANATIFERA, or GOOSE-BEARING BARNACLE TREE. It often occurs adhering, by means of its long pedicle, to the pieces of drift-wood floating in the sea about the Hebrides, and sparingly on other parts of the coast. This shell was formerly admitted to be the origin of the Bernacle Goose! Isidore, Boethius, and several other ancient writers, relate a tale relative to this circumstance, which is credulously repeated by Gerrard, and even by authors subsequent to his time. The tenor of their observations amount to an absolute assertion that they have seen the young of the Bernacle Goose, which have been hatched in those shells drop out partly fledged, and taking to the water, swim away! The beards of this animal have a feathery appearance, and being commonly observed hanging out of the shells, no doubt induced a ready belief, in those days of vulgar error, that they must be the genuine feathers of a bird; at the same time that the fertility of their invention enabled them to determine even the identical kind of bird to which those supposed feathers appertained. This is a similar group to the one exhibited about five years since in London as a great curiosity, under the name of the Goose Tree.

Marked C. RATTLE-SNAKE, (*Crotalus Horridus*. Linn.) before described page 26. In the transactions of the American Phil. Soc. vol. iv. is a memoir concerning the fascinating faculty which has been ascribed to the Rattle-Snake, by Benjamin Smith Barton, M. D. This ingenious essay will serve to eradicate the last remains of a superstitious opinion, long maintained in Natural History. Dr. Barton proves by a variety of facts, that the motion of birds, which have been attributed to a fascinating power in the eyes of serpents, are in reality calculated to drive away the reptiles from the bird's young, or to divert attention from the nest.

He says, I have already observed, that the Rattle-Snake does not climb up trees; but the Black Snake and some other species of the Genus *Coluber* do. When impelled by hunger, and incapable of satisfying it by the capture of animals on the ground, they begin to glide up trees or bushes, upon which a bird has its nest. The bird is not ignorant of the serpent's object, she leaves her nest, whether it contains eggs or young ones, and endeavours to oppose the reptile's progress. In doing this, she is actuated by the strength of her instinctive attachment to her eggs, or of affection to her young. Her cry is melancholy, her motions are tremulous. She exposes herself to the most imminent danger; sometimes she approaches so near the reptile that he seizes her as his prey; but this is far from being universally the case. Often she compels the serpent to leave the tree, and then returns to her nest.

Marked D. TORPEDO RAY, (*Raja Torpedo*, Linn.) This fish has been celebrated both by ancients and moderns, for its wonderful faculty of causing a numbness or painful sensation in the limbs of those who touch or handle it. The shock or sensation given by the Ray is attended with all the effects of that produced by the Electrical Machine, so far as experiment has hitherto enabled us to discover. Although this fish does not appear to be furnished with any striking exterior qualities, although it has no muscles formed for great exertions, nor any internal conformation differing from the Ray kind; yet such are the wonderful powers it possesses, that in an instant it can paralize the hand or body that touches it, and cause for a while a total suspension of the mental faculties. Reaumer has, by several experiments, attempted to demon-

strate, that it is not necessarily, but by a voluntary effort, that the Torpedo benumbs the hand that touches it. On every trial, he could readily perceive, when it intended to give the stroke, and when it was about to continue inoffensive. In preparing to give the shock, it flattened its back, raised its head and tail, and then by a violent contraction in the opposite direction, struck with its back against the finger that touched it; and its body, which before was flat, became round and lumped. It is said that the negroes can handle the Torpedo without being affected; and we are told the whole secret consists in keeping respiration suspended. The electrical power is, however, known to terminate with the life of the animal, and when dead, it is handled or eaten with perfect safety. It is an inhabitant of the Northern, European, and Mediterranean Seas. The parts containing the electrical organs are dissected open for the purpose of displaying them to view. Mr. John Hunter ascertained the number of columns in one organ to amount to 1182, and fully confirmed his opinion, at the same time, that their numerous horizontal partitions were very vascular. These experiments were made on Torpedos taken in Torbay, where they are not uncommon, of a large size, some of which has been known to weigh about 50 lbs; while those on the coast of France and the Mediterranean Sea, scarcely weigh 10 or 12 lbs. avoirdupois. Another specimen is preserved in Glass Case 5. Marked E.

Saloon. Left Apartment. Nat. Hist.

In the Left Compartment of the Glass Case on the right of the room, near the window, are placed a few miscellaneous articles; as Two Celts of Stone neatly made, one of which marked (A) was turned up by the plough in the parish of Fenwick, Ayrshire, and presented to the Museum by the Rev. Wm Boyd, Minister. The other (B) was found in the remains of an old encampment in Denny Moor, presented by Mr. Richard Calender. Many doubts have arisen respecting the origin of these instruments, called Celts; but our opinion is they were implements, belonging to the aboriginal inhabitants of these islands, before the use of iron was known The strong resemblance they bear to the stone axes, chissels, &c of the native inhabitants of the new discovered islands of the South Seas may be seen by comparison with those of these islands, preserved in the Case of South Sea rarities in this room.

Miscell.

Mr. Pennant observes in his History of Wales, that a flint axe used by the aborigines of our island was discovered stuck in certain veins of coal exposed to the day in Craig y Pare, Monmouthshire; and in such a situation as to render it very accessible to inexperienced natives, who in early times were incapable of pursuing the veins to any great depth.

Hair Balls from the stomach of an ox or cow. These masses of hair are incrusted with a smooth brown coat of about a line in thickness; by scraping off a small quantity, and pouring spirit of nitre on it, it occasions a strong ebullition. These balls are supposed to be formed by the motion of the stomach, which in these animals are very strong and frequent, by which motion the hair which is attained by the creature's frequently licking itself, and carried into the stomach, is wrought and compacted together, as wool or flax is by the hands of the workman in making a hat. Marked C.

Resting against the end of the Cabinet, on a base of stone, is a fine Egyptian figure of Isis in a sitting posture, the arms crossed on the knees; in one hand the Sistrum or Egyptian Lyre; on the front of the figure, various hieroglyphics. The whole is in fine preservation, and a very valuable antique.

ZOOPHITES, IN GLASS CASE (A.)

In the Apartment on the Right Hand of the Saloon.

No. 1. Red Organ Pipe Coral, (*Tubipora Musica*, Linn.) A deep red pipe coral, with transverse partitions, connecting perpendicular tubes. There is but this one species of the genus yet discovered, but many varieties are to be met with in the cabinets of the curious. The colour sometimes

Saloon. Right Apartment. Nat. Hist. Glass Case. A.

varies from a deep red to an orange yellow; they grow to the size of a foot, often to two and three feet or more diameter. The manner of their growth is by first adhering to a rock, shell or stone, and from a small beginning extend themselves into a hemispherical form, their tubes appearing like so many rays; and as they increase in length, in order to fill up the space between the tubes, new tubes arise upon their transverse partitions. The diameter of the tubes is at a medium, about one-tenth of an inch, and in length they vary from a quarter to half an inch between the horizontal partitions.

It is a native of New South Wales, Mollucca Isles, Java, and Malacca. The Malays call them BATU-SWANGE, that is to say, the Magician's Stone; as they suppose them to have a magical virtue; for that reason they hang them on trees, to keep thieves from the fruit, it being a prevailing opinion among them, that those who attempt to steal, where they are hung up, will be seized with eruption of red pimples. They are also very careful not to sit on them, being apprehensive of stranguary; on the contrary the inhabitants of Java and Malacca, give the powder of this coral against the stranguary. The natives of the Celebes put some of the powder on any wound that is made by a venomous creature, and for this purpose always carry a small piece of it with them.

No. 2. MUSHROOM MADREPORE, (*Madrepora Fungites*, Linn.) A great variety of specimens of this curious Madrepore.

These are met with in abundance in the Red Sea, and the East Indian ocean; and are often six or seven inches diameter, but more frequently smaller. The young are frequently seen adhering to the old ones, with large rising lamellæ.

Rhumphius describes the animal. He says it is covered with a thick viscid matter like starch; that the more elevated folds or plaits have borders like the denticulated edges of lace; that these are covered with innumerable oblong vesicles formed of the same gelatinous substance, which appear alive under water, and may be observed to move like an insect; that when taken out of the sea, and exposed to the air, all the mucous part with the little vesicles shrunk in between the erect little plates or lamellæ, and disappeared; and in a short time, like the Medusa, or Sea Jellies, melted away, leaving behind them a most disagreeable fetid smell.

No. 3. LAMB MADREPORE, (*Madrepora Pileus*, Linn.) Inhabits the Indian seas. In the furrow along the middle is a line of stars, with their lamellæ disposed on each side, like parallel pinnæ, or rays; under these on each side are other rows of stars, as it were linked together, with their rays nearly parallel, and pointing upwards and downwards; the margin all round is terminated by sharp erect laminæ. No. 3.* A very elegant YOUNG PILEUS, mounted on a small pedestal.

No. 4. LACE CORAL, (*Millepora Cellulosa*, Linn) (*Moraminosa*, Ellis. Zooph.) This little Millepore is formed like a net, funnel-shaped, and irregularly waved and plaited in the margin. It is full of pores only on one side.

This elegant little coral is sometimes found on the British coast, though it does not put on those beautiful forms that we find the specimens from the Mediterranean Sea. The British is generally of a funnel shape; but the foreign is more loosely folded and waved, and looks like open lace; the under part is quite smooth between the openings, but the upper surface is full of cells, which are disposed in a regular quincunx order.

No. 5. JOINTED RED CORAL, (*Isis Ochracea*, Linn.) This curious Isis has a stony stem irregularly channelled, as if eaten into; the branches are many, dichotomous, and spread out; the joints are connected by deep yellow spongy knobs, the flesh is of a pale yellow, full of starry mouths, that cover polypes with eight claws.

It is found in the East Indies among the Spice islands. It is so very liable to fall to pieces when dry, that good specimens are very rare.

No. 6. BLACK AND WHITE JOINTED CORAL, (*Isis Hippuris*, Linn.) This

Isis has a jointed stem, which rises into many loose branches; the bone or support of the animal consists of white, cylindrical, stony-channelled joints, connected together by black contracted horny intermediate ones. The flesh is whitish plump, and full of minute vessels; the surface of it is full of the little mouths of the cells, which are deposited in a quincunx order, covering the polypes with eight claws. Saloon. Right Apartment. Nat. Hist.

This beautiful coral is frequently brought by our East India ships from Prince's Island, in the Straits of Sunda on the southern coast of Sumatra. Specimens with the flesh on them are rarely to be met with, as the sailors generally scrape it off to shew the beauty of the black and white joints. Glass Case A.

No. 7. Under a bell glass is preserved a rare specimen of the BASE or ROOT of the ISIS HIPPURIS, or BLACK AND WHITE JOINTED CORAL. It is white, and not jointed with the black woody-like part as in the stem and branches; the part that was next the body it was taken from is quite flat. It is not figured or described by any author that we are accquainted with, and is deemed unique, being the original specimen in the late Duchess Dowager of Portland's collection.

No. 8. GORGONIA PRETIOSA, TRUE RED CORAL. Ellis Zoophites, (*Isis Nobilis*, Linn.) *Gorgonia Nobilis Turtons*, Linn. This gorgon grows spread flat, with dichotomous branches that lessen towards the extremities. The flesh is of the colour of red lead, soft, slippery, and full of minute vessels; the mouths are irregularly placed on the surface, and rise up in a conical form, consisting of eight valves just opening, from whence proceed polypes of a white colour with eight claws; each claw has a double row of fibres on both edges. The bone is stony, and of the brightest red, marked with minute furrows on the outside, and with little hollow places here and there, that have corresponded with the cells. This specimen is very elegant in its form, mounted on a pedestal. Several other elegant branches are in the collection.

No. 9. VENUS FAN GORGONIA, (*Gorgonia Flabellum*, Linn.) The trunk and branches of this sea fan are pinnated, and by the means of the small branches crossing each other and blending together, they compose the elegant reticulated form. The polypes of the animal forming the fleshy part have eight tentacula or claws. It is found principally in the American seas, where it grows to three and four feet high; they are also brought from the Mediterranean and the East Indian seas.

10. MADREPORA CYATHUS, (*Var. Madrepora Cylindracea.*) Ellis Zooph. Cup Madrepore. It is a simple cylindrical coral, scarcely attenuated at the base.

This coral is dragged up in abundance by the fishermen on the coast of Italy, it is always found single without branches, and generally adhering to some other coral or other substance; it is of a white colour, and very hard; the lamellæ are forty in number, with as many intermediate small ones; the latter extend to the margin, but do not reach to the bottom of the star, like the larger ones The common or middle size of this coral is about two inches long, and three quarters of an inch diameter in the broadest part.

It has been supposed by some writers to have been the beginning of Madrepora Ramea, but the intermediate lamellæ of the latter in a cross section appear branched; besides the Madrepora Ramea is of a much looser texture, more deeply channelled on the outside, and of a ferruginous colour.

11. MADREPORA ANTHOPHYLLITES, *Flowered-leaved Madrepore.* Fasciculated branches, clubbed, shaped like horns, smooth, rather bending, and occasionally coalescing. From the East Indies.

12. MADREPORA FASCICULARIS, *Clustered Madrepore.* Fasciculated with simple branches, clubbed, distinct, fastigate, grown together at the base; lamellæ projecting beyond the margin. Island Mauritius. This coral is frequently found fossil in Egypt.

13. MADREPORA VIRGINIA, *a Shrubby Madrepore.* Branches often divided

Saloon. pair-wise, very much branched, twisted and uniting; the stars rather prominent and distinct. From Bahamas.

Right Apartment. 14. MADREPORA ROSEA, *Rose-coloured Madrepore.* Shrubby, branches sometimes divided pair-wise, spreading stars prominent often in pairs; lamellæ unequal and projecting out, centre convex and as if worm-eaten. It is from the Island of Providence; and is of a fine rosy colour when fresh from the sea, but fades on drying.

Nat. Hist. Glass Case A. 15. MADREPORA RAMEA, *May-Blossom Coral.* Branching; shrubby, of a ferruginous colour; branches, the smaller oblique, subpinnate, bending upwards, cylindrical, stars terminal; when fresh taken from the sea it has the smell of May blossom, or Hawthorn bloom, from whence its English name. Sicily.

16. MADREPORA LABYRINTHICA, *Sharp-ridged Brain-Stone.* Conglomerate long winding sinuses dilated at the base; dissepiments ragged, equal, broad, the sinuses simple. East Indies.

17. MADREPORA SINUOSA, *Broad-ridged Brain-Stone Madrepore.* Conglomerate winding sinuses, short, flexuose, spreading dissepiments unequal and rugged, the sinuses sometimes double, the lamellæ toothed.

18. MADREPORA MÆANDRITES, *Meandering Madrepore, or Butter-Print Coral.* Conglomerate, dissepiments simple, rather incomplete, lamellæ thickened, equal, separated, thinner inwards, usually complete. West Indies.

19. MADREPORA PHRYGIA, *Embroidered Madrepore, or Lace-Work Brain-Stone.* Conglomerate, sinuosities very long and narrow, their course perpendicular and simple, dissepiments simple, laminated, lobed, the lamellæ somewhat separated. Pacific Ocean and East Indies.

20. MADREPORA AMBIGUA, *Doubtful Madrepore.* Conglomerate, sinuosities stelliform and flexous, the sinuses clustered together, dissepiments thickish, simple, lamellæ standing wide. East Indies.

21. MADREPORA CEREBRUM, *Brain Madrepore.* Conglomerate sinuosities very long, winding, roundish at the base, dissepiments ragged, equal, the passages simple and narrow. West Indies.

22. MADREPORA ASTROITES, *Star-stone Madrepore.* Aggregated stars collected together, sunk below the margin, the interstices porous, lamellæ sharp and roughish. Pacific Ocean.

23. MADREPORA GALAXEA, *Milky-way Star-stone.* Aggregated, the stars somewhat aggregated and sunk below the margin, the sides thick, smoothish and pretty distinct, lamellæ very thin, with the centres rather ragged. West Indies.

24. MADREPORA PLEIADES, *an Aggregate Madrepore.* Stars rather tapering, the margins acute, elevated, the interstices smoothish, concave, hence in appearance somewhat cavernous. East Indies.

MADREPORA ANNULARIS, *Star-stone Coral.* Aggregated stars, round, equal, margin elevated, the interstices smooth, concave, radiated. East Indies.

26. MADREPORA SERIATA, *a Branchy Madrepore.* The branches tapering to a point, stars arranged longitudinally, the superior margin projected, arched, ciliate. From East Indies, scarce.

27. MADREPORA MURICATA, *Prickly Madrepore.* Branchy, with the branches club-shaped, smoothly compressed, stars contiguous (in the place of lamellæ) pointedly tuberculate. West Indies.

28 MADREPORA CYATHUS, *Cup Madrepore.* Simple, club turbinate, with an obconical star, slender at the base, centre somewhat projecting, ragged, doubled. Mediterranean.

29. MADREPORA ANGULOSA, *Angular Madrepore.* Partly divided, subfastigiate, all the stars terminal, irregular, sinuses flexous, with ragged centres. West Indies.

30. MADREPORA AMPLIATA, *Diffused Madrepore.* Leafy, smooth, connect-

ed, the passages keeled, narrow, rather sharp, with a subdichotomous striated coral on the under side. Sicily. Saloon.

31. MADREPORA CRISTATA, *Crested Madrepore.* Leaf-like crested, connected stars in series, sunk in the centre, passages smooth, flattened. East Indies. Right Apartment.

32. MADREPORA INTERSTINCTA, *Dotted Madrepore.* Aggregated, stars cylindrical, deep, distinct, interstices porous, with a smooth thick doubled coral; this is the blue coral of Pallas's Zoophites. From East Indies. Nat. Hist. Glass Case A.

33. MADREPORA UNDATA, *Waved Madrepore.* Leafy smooth connected stars in a series, passages between the stars elevated, keels rounded, thick. East Indies.

34. MADREPORA FASTIGIATA, *Fastigiate Madrepore, or Branched Fungus Coral.* Dichotomous subfastigiate branches somewhat distinct, all the stars terminal, and rather regular, those of one year's growth flatly doubled. West Indies.

35. MADREPORA DAMICORNIS, *Deer-Horned Madrepore.* Branched with numerous small branches, tapering and somewhat divided, stars thickly spread, hidden ciliate. East Indies.

36. MADREPORA PORITES, *Club-branched Coral.* The branches club-shaped, smoothly compressed; stars contiguous (in the place of lamellæ,) pointedly tuberculate. West Indies.

SPONGIÆ, or SPONGES.

These are of animal origin, fixed, and flexible, and very torpid, growing in a variety of forms, composed either of reticulated fibres or small spines interwoven together, which are clothed with a living gelatinous flesh, full of small mouths or holes on its surface, by which it sucks in and throws out the water. The texture of these animals is very different in different species; some being composed wholly of interwoven reticulated fibres, whilst others are composed of little masses of strait fibres of different sizes, from the most minute spiculæ to strong elastic shining spines, like small needles of one-third of an inch long; besides these, there is an intermediate sort between the reticulated and the finer fasciculated kinds, which seem to partake of both sorts. Glass Case B.

Glass Case marked B, (in the right hand apartment of the Saloon) contains a variety of species of this ZOOPHITE, as *Spongia Infundibuliformis. Spong. Palmata, Spong. Officinalis*, &c. &c.

Our limits being so circumscribed we shall only attempt to describe a few species of these singular Zoophites; and as Spongia Officinalis, is well known to every one, we conclude the description of the common Sponge will prove more satisfactory than those of others more rare, and to which common access cannot at all times be had.

No. 1. COMMON SPONGE, (*Spongia Officinalis*, Linn.) Is found in a variety of forms; it is elastic, very full of holes; it grows into lobes, and is of a woolly consistence. It generally adheres to rocks by a very broad base; it is often found inclosing small stones and shells; a variety of marine animals pierce and gnaw it into irregular winding cavities; these appear on the outside by large holes raised higher than the rest; it varies in colour from a pale to a deep yellow, and likewise in the consistence of the fibres. When we cut it perpendicularly, we find the internal part consisting of small tubes, which divide into branches as they approach the surface. These tubes, composed of reticulated fibres, extend themselves every way; by this means increasing the surface of the sponge, and ending on the outside in an infinite number of small circular holes, which are the proper mouths of the animal; each of these holes are surrounded by a few erect pointed fibres, which appear as if wove in the form of little spines. These tubes, with their ramifications, in the living state of the sponge, are clothed with a gelatinous substance, properly called the flesh of the animal. This the fishermen, as soon as they are brought on shore, are obliged to squeeze out and wash the sponge clean, to prevent its growing putrid. When they are first

Saloon:

Right Apartment.

Nat. Hist.

Glass Case B.

taken out of the sea, they have a strong fishy smell, and if burnt, the smell soon discovers its animal nature. This kind, of which there are many varieties, is chiefly collected about the Islands in the Archipelago, where it is a considerable article of commerce.

No. 2. SPONGIA DIGITATA, curious branched piped sponge, commonly called the Fingered or Glove Sponge, from Florida.

No. 3. CAT'S TAIL SPONGE, from the Gulph of Florida.

No. 4. A curious NETTED SPONGE, a variety of Spongia Cancellata of Linn.

No. 5. CAVERNOUS WIRY SPONGE, from the West Indies.

No. 6. SPONGIA CELLULOSA. Cellular Sponge. West Indies.

No. 7. A specimen of a Sponge commonly called the FLUTE SPONGE, from its likeness to that instrument; from the Gulph of Florida.

No. 8. A curious reticulated or NET-LIKE SPONGE, from the East Indies.

Miscell. —Scarce.

Glass Case C.

Glass Case marked C. contains a collection of AGATES, Agate Nodules, internally filled with Amethystine Crystals of Quartz from Germany; a variety of Calcedonies, Quartz Crystals, Crystallized Lamellar Heavy Spar, and various other large and fine specimens of Minerals.

Glass Case D.

Glass Case marked D. Immediately above are placed above one hundred specimens of POLISHED MARBLES, among which are the Lumachella Brocatella, Verde Antique, Antique Alabaster, Landscape or Ruin Marble, &c.

A very large slab of the LABRADORE HORNBLENDE, commonly called LABRADORE SPAR, rich and resplendent in colour, varying blue, green, copper, flame, and yellow colours, as the light is brought to act on it.

Glass Case E.

Glass Case marked E. contains fruits, pods, leaves, &c. of Vegetables, among which is several specimens of the Malacca Bean—Cocoa Nut—Sand Box (*Hura. Crepitans*, Linn.)—Several small Gourds of various shapes—Cotton Pod from Gallom, four hundred miles in the interior from Senegal—Fruit of the Mahogany Tree with the seed—Leaf of the Bread-Fruit Tree from Otaheite (*Artocarpus Incisca*, Linn)—Horned seeds of the Water Lily from China—Seed Pod of the Cyprus Tree, North America—Wood of the Camphor Tree—Castor Seeds; from these the Castor oil is expressed—(*Dolichas Ureus*, Linn.) or Horse-Eye Bean—Silky Pods of Apocynum—Purse Nut from the East Indies—Seeds of the Swamp Paramato from Carolina—Seeds of the Tooth-Ach Tree (*Anthoxylum*, Linn.) from Carolina—Acorns of the Hickory Tree (*Juglans Alba*, Linn)—Everlasting Flowers from the Cape of Good Hope, these still retain their colours, though probably they have been forty years in the collection—The great and small, black and red Tropical Pea—Sea Grape Seed (*Phedra Aistachya*, Linn.)—Tamarind Pods—Ebony Pods—Cotton from Upper Egypt;—Nicker Nuts, or Negroes Marbles—A large Bean Pod gathered from the Ragamhall Hills, four hundred miles from Calcutta; it grows on a very slender procumbent plant, is an Annual, supposed to be of the Hibiscus tribe, made no use of by the natives or Europeans; presented to the Museum by Mr. JOHN FREER, Surgeon. A curious seed vessel from Italy, the stalks of which are used as toothpicks—Beetle Nuts; the leaves of this species, (*Piper Betle*, Linn.) inclosing a few bits of the Areca, are what the Asiatics, so universally chew.

Two capsules of that excessive rare plant the Sacred Bean of India, (*Cyanus Nelumbo.*) Smith's Exotic Bot *Nelumbium Speciosum* Wild. Tamara Rhed. Malab. This plant is most generally known to the learned of Europe, under the name of Lotus, it having been confounded, by very able writers, till lately, with the Lotus of Egypt, (*Nymphea Lotus*, Linn.) It is remarkable, says Dr. Smith, that no recent writer on the mythological history of the Nelumbo, should have been aware of its being the celebrated Keeamos, or Pythagorean Bean, which is so evident from the description of Theophrastus, "the cellular head like a "round wasp's nest, with a bean in each, all projecting a little beyond its "prifice, &c." See specimen. By this discovery many things hitherto defi-

cient of explanation may be elucidated. We can no longer wonder at the prohibition of these Beans to the Egyptian priests, or the disciples of Pythagoras. A plant consecrated to religious veneration, as an emblem of reproduction and fertility, would be very improper food for a person dedicated to peculiar purity; the Egyptian priests were not allowed even to look at it. Saloon. Right Apartment.

The large and splendid rose-coloured flower of this plant, streaked with crimson, is very beautiful; it grows in still pools of water in the East Indies, its root is used for food, and as the Pythagorean prohibitions are now obsolete, perhaps these Beans, if imported from India, might not be unwelcome at our tables. Nat. Hist. Glass Case E.

Glass Case marked F. Here are placed a few MEDALS in Silver, Copper, &c of great and illustrious personages of all nations, among these are J. J. Rousseau—Mar. Saxe—Mar. Schomberg—Count Schulenburg—Franc. Redi —Baron de Reede—Card. Richelieu—Card. Quirini—Card. Rospigliosi—Pasquier Quesnel—Katherine II. of Russia—Card. Maximus—Peter Alexowitz Emperor of Russia—Angelo Politiano—Baron de Montesquieu.—Livius Odeschalchi—Nicolaus Palmerius—Nicolaus Potier—Franc. Mauroc—Card. Mazarene—Card. Count Mazzuchelli—Louis XIII. and Anne his Queen. Medals. Glass Case F.

Ludovicus XV. in Silver—Ludovicus Dux Borbonius—Petrus Jurieu—Guil. de Lamoignon—Count a Lautrec—Louis XIV. and Anne his Mother—Galileo—Hugo Grotius—Fred. Count Gullenborg—Gustavus Adolphus King of Sweden—Marsilius Ficinus—Fredericus Borussorum Rex—Lud. de Fort Consul Primar Reip. Genev.—Card de Fleury—Count Duodo—Jos. Jean Baptist Fleurian—Card. Farnesius—Cath. II. Empress of Russia—John Jac. Chifletus—-Dante—-G. Gaspar Dodun—-Card. Chisi—-Card. de la Grange —Maria Queen of Poland—Charles XII. King of Sweden—Christina Queen of Sweden—-Duke of Bourbon—-Joh. Jac. Burlamaqui—-John Calvin—-Emp. Ferdinand II.—Ariosto—Card. Azzolini—Card Borromeo—Card. Bullioni—Abbe Bignon—Viglius Auta—Azuichem—Catherine II. and Peter of Russia—Ludov. de Boucherat—Diana Dux Valentinorum—Count Corn. Tromp—Madame d'—EonBust of Linnæus, in lead—Card. Portocarrero—John and Cornelius de Wit—Marshal Turenne—H. W. Rumpf—Marshal duc d'Villars—Voltaire—Baron Asch.—Maria Theresa Queen of Hungary—Oct. Vestrius—Card. Ursino—Maximilian Titon, &c.

In the centre of this room is a similar Cabinet to those in the Saloon and the left apartment, with double horizontal Glass Cases on the top, in four compartments, filled with rare and curious mineral substances. Minerals. Centre Cabinet.

Glass Case No. 1, contains twenty-one specimens of WOOD STONES. In these specimens although the wood is perfectly jasperified, still the bark, knots and veins are distinguishable; many of these are of the greatest beauty and value. Glass Case 1.

Eight specimens of RARE MARBLES, two of which are Verde antique.

Twenty beautiful specimens of SERPENTINE in slabs, cut and polished, from Portsoy, Scotland. Added to the collection by Professor COUPER, Glasgow, and JOHN MAVER, Esq. London.

Glass Case marked 2. contains a number of elegant speciments of CRYSTALS OF QUARTZ; Amethyst Gem from East Indies; various slabs of polished Amethyst, combined with Fibrous Amethyst, from Germany and other parts; a Cairn-Gorum, Scotland; Quartz Crystals with Titanium; a model of the Regent Diamond in pellucid Quartz, now worn by Buonaparte in the hilt of his sword, valued at L120,000; a beautiful and large oval slab of crystal of the greatest purity; other slabs of polished Crystal, Tourmalines, a fine specimen of Thumerstone beautifully crystallized, &c. &c.—N. B. Names are attached to the Specimens in this Case. Glass Case 2.

Glass Case marked 3. on the opposite side contains a beautiful display of the WOOD OPALS; or Opalized Woods, of various textures; in some the knot of the wood is perfectly preserved, and the grain of the wood in others is distinctly seen, most of these specimens are cut and polished; they are found at Ponick near Schemnitz and at Telkobanya in Hungary. Glass Case 3.

Saloon. A variety of SEMI-OPALS from Bohemia, Frankfort on the Mayne, Silesia &c.

Right Apartment. COMMON OPALS, a variety of specimens, from Freyberg, Poland, Johanngeorgenstadt, and Schneeberg in Bohemia. The specimen marked A. is commonly known by the name of GIRASOL, it is a pure milk white translucent opal; it is from Telkobanya in Hungary.

Centre Cabinet Minerals. Several specimens of PRECIOUS OPAL in a card box, cut and polished as gems; from Freyberg in Saxony.

A fine specimen of the PRECIOUS OPAL in the matrix, cut and polished, exhibiting the most beautiful play of colours, as verdegris green, emerald green, apple green and siskin green, combined with red, blue, and yellow of their different tints. This was brought from Cscherwitza near Kashau in Upper Hungary, and is highly valued.

Glass Case 3. Seven EGYPTIAN PEBBLES, or JASPERS, cut and polished, of the brown and red species. The first is of a chesnut brown colour, at times yellowish brown, cream yellow, and yellowish grey. It is characteristic of this fossil, that the interior or centre has a yellowish grey colour, which often passes into cream yellow, but towards the exterior, its colour becomes yellowish brown, and chesnut brown.

The brown colour forms concentric circular delineations, and between these it is spotted with black; between the spots are small arborescent delineations of the same colour. It is found at Grand Cairo in Egypt.

The RED EGYPTIAN JASPER is intermediate in colour between blood red and scarlet-red; on the surface it is often ochre yellow, also smoke and bluish grey. These colours form ring-shaped delineations, which are conformable with the external surface.

It occurs in a bed of red clay iron-stone, to which it owes its colour, it has been hitherto found only in the Electorate of Baden.

A fine specimen of STRIPED JASPER, or RIBBAND JASPER. In this mineral there are always several colours together, and these are arranged in striped and flamed delineations, from whence its name; it is found in Saxony, also very beautiful from Siberia, where it occurs in great plenty.

Six beautiful specimens of AZURE STONE, or LAPIS LAZULI, all cut and polished. The colour of this elegant stone is perfect azure blue; in some varieties it passes into Berlin blue, even sometimes approaching to sky blue, again to smalt blue of all degrees of intensity; from the admixture of iron pyrites it is often called blue and gold stone. On account of its beautiful appearance and the fine polish it is capable of receiving, it is worked into various articles of dress, as ring-stones, seal-stones, snuff-boxes, &c. It is also much in use for ornamenting altars, in Mosaic and Florentine work; it is highly valued by painters, on account of the fine ultramine blue colour which is prepared from it; it is found in Persia, Bucharia, China, Great Tartary, and Siberia; in America it is said to have been found at Atakama in Chili; and in Europe among the ruins of Rome.

Glass Case 4. Glass Case marked 4. This compartment contains several rarities in the mineral kingdom; as two specimens of METEORIC STONES, supposed to have fallen from the clouds; one of these specimens is a fragment of the stone that fell on the estate of Major Topham in Yorkshire on the 13th Dec. 1795, which weighed 56 lbs. avoirdupois; the other is part of Stone that fell on the 5th April, 1804, at Possil near this City, and is all that was preserved; the remainder being lost through the ignorance of the labourer who saw it descend, by breaking it with his hammer among the rubbish of a quarry pit. These were presented to the Museum by Miss CRAWFORD of Possil.

A small fragment of NATIVE IRON, this rare mineral has been hitherto found only in loose masses on the surface of the earth, and is usually covered with a brownish coloured rust, and has intermixed an asparagus-green coloured mineral, which is supposed to be of the nature of Olivine.

Pallas discovered a mass of Native Iron about 1680 lbs. weight, on the sum-

mit of a mountain, on the banks of the great river Jenisei in Siberia. The Indians in the district of St. Jago Del Estro, in South America, discovered a mass of Native Iron, which is calculated to weigh about 300 lbs. weight, which is described in the London Trans. by Don Rubin de Celis; it has been thought to have been the remains of decomposed meteoric stones, as, on their analysis, it has been found that Native Iron is one of their principal ingredients.

Dust or Sand that fell on the Island of Barbadoes during the eruption of the Souffrier mountain at St. Vincent's in the year 1812, presented by Alexander Garden, Esq. 11th July, 1812.

The analysis of this substance made by Mr. Higgins, Professor of Chemistry to the Dublin Society, by their order, is as follows.

The Dust as it is called, that lately fell in the Island of Barbadoes and the neighbouring islands, is of a whitish grey colour, and in the state of very minute powder, yet rough to the touch. When examined by aid of a microscope it exhibited the appearance of siliceous translucid sand, of an angular, sharp and irregular shape, mixed with a great number of brownish black and very minute particles, which are strongly attracted by the magnet, and must of course be ferruginous, and nearly in a metallic state; when exposed to a very low red heat, it acquired a brownish grey colour, and gained about 0.58 per cent. in weight, owing no doubt to the oxydation of the Iron.

Analysis—55 grains of this mineral contain the following ingredients and proportions, viz.

Silex, 20 parts.—Iron 9.50.—Lime 1.—Magnesia a trace 23.—Total 50.—Loss 1.50.—Whole 55 grains.

From the foregoing description and analysis, it is, I presume, pretty clear, that this substance bears no analogy to meteoric productions, but must have been elevated to high regions of the atmosphere by a violent discharge of the elastic fluids accompanying a volcano.

Pyrites of a brilliant golden colour, from Peru, commonly known by the name of Piedra del Inca, or the Royal Stone. The soldiers of Montezuma's army on their first arrival on the New Continent, took these brilliant masses to be of pure gold. It is also brought from China in cubic large crystalizations, and is rare.

A small specimen of that rare mineral the true Avanturine, part of the original specimen belonging to the Leverian Museum, London, which cost the Proprietor Two Hundred Guineas. At the sale of that collection L.250 was refused for it. This curious article was found in the ruins of the triumphal arch of Julius Cæsar in the valley of Suse in Piedmont, in 1788, by the Sieur Francis Ludwig of Mayence in Germany. It takes a high polish, and is much harder, and infinitely more beautiful, than the stone commonly known by the same name. See the printed vouchers attached to the Specimen.

A fragment of a very large Agate Nodule from France. This is partly hydrophanous, or becoming much lighter when wetted with water; the original Nodule was in the Leverian Museum, and sold in that sale for L.50 to the celebrated Mr. Jennings of Chelsea, so well known for his taste in virtu. These two last articles were added to the Museum by Captain Laskey.

Two specimens of the Lumachella, or Fire Marble, as it is commonly called. This is a Brown Marble, replete with shells of various kinds, chiefly of the univalve genus, amongst which are fragments of the pearly shells of the Anomia, which being of the most beautiful colours, principally crimson, has obtained for it the name of Flame or Fire Marble. It is very rare, and is found in the neighbourhood of Vienna.

Several specimens of Torcois, or Torquise, cut and polished. These are considered by authors as fossil bone, impregnated with blue particles of Copper Ore, from Persia.

Pea Stone la Pisolite, Broch. from Carlsbad in Bohemia, consisting of a mass

Saloon

Right Apartment.

Centre. Cabinet.

Minerals.

of small and large orbicular bodies, formed by a succession of laminæ, in like manner as in the animal calculi.

A fragment of a most capital mass of the amber-coloured ONACHINE CHALCEDONY, supposed to have been brought from the East Indies. It is partly formed in cavities, which have a fine polished mamillated or bubbled surface. Sir ASHTON LEVER, in whose Museum it preeminently stood the admiration of all persons, presented this piece to the late Dr. HUNTER, and is now considered of the greatest rarity and value. L.800 was refused for the original specimen, being valued at L.1000. An elegant drawing in water colours was made from it for the National Museum at Paris, by order of the Emperor Napoleon.

MINERALOGICAL DEPARTMENT.

The Minerals belonging to the Museum are contained in the three Cabinets, already mentioned; these have been arranged according to the system of Werner, by Professor Jameson of the University of Edinburgh, and contain a very valuable collection of specimens of almost every mineral known.

To enter into a minute detail of the whole would be more than our limits can allow. The most remarkable are as follow.

1. Class—EARTHY FOSSILS—1. Genus *Diamond.*—A very fine brilliant, cut and set round with small brilliants, in a ring. A yellow Diamond cut and set as a ring surrounded with small brilliants. Two Diamonds in their native state, one yellow, from the mines of Golconda. Two fragments of Diamonds having undergone combustion, one by a fire heat, the other by a burning lens.

The most common colours of the Diamond are white and grey, but besides these two colours, it occurs, blue, red, brown, yellow and green.

The experiments of Darcet, Lavoisier, Tennant and others, have demonstrated that it is nearly pure carbone, and begins to burn at a temperature not exceeding 14° or 15° of Wedgewood.

2. Genus *Zircon.*—Zircon from Fredrichschuarn in Norway. Mr. Jameson has lately found it in Galloway, Scotland, embedded in Sienite.

Hyacinth from Ceylon. It is found likewise in Ely in Fifeshire.

3. Genus *Flint.*—Chrysoberyll, from Brazil—Olivine from Bohemia, found frequently in Scotland—Augite from Norway, found at Arthur's Seat, near Edinburgh, and in the Island of Rum, one of the Hebrides—Vesuvian from Mount Vesuvius—Garnets, precious and common. The precious Garnet, which is found occasionally in Scotland, appears, from the description of Pliny, to be the Carbuncle of the ancients. Lib. 37.—Pyrope from Hungary, and Bohemia, it has likewise been found at Ely in Fifeshire in the sand of the sea shore—Grenatite from St. Gothard in Switzerland.—Spinelle, from the kingdom of Pegu in Ceylon—Sapphire, from the same place—Corundum, from China and the coast of Malabar—Several Topazes from Brazil and Saxony. The principal colour is wine yellow of all degrees of intensity; from the deep wine yellow it passes into flesh red, crimson red, and sometimes, but very rarely, bordering upon lavender and lilac blue.

In the collection of the Museum of Nat. Hist. at Paris, there is a Brazilian Topaz, which weighs 4 ounces 6 grains. The Saxon Topaz is thought by jewellers to have the most fire.

Topazes of a very large size, weighing seven oz. 3 dwt. 18½ grains perfectly crystalized, have lately been discovered in the mountains of Scotland, and described by Professor Jameson, in Wern. Trans. of Edin. Rolled pieces have been found weighing 1 lb. 3 oz. 8 drams, and 8½ grains, Troy weight, now in the possession of Mr. Farquharson of Invercauld.

Emerald from South America—Beryll, precious and schorlous. The first from Dauria on the frontiers of China, and the Brazils. It has likewise been found in the upper part of Aberdeenshire, in Scotland, in six-sided prisms,

Saloon.

Right Apartment.

Centre Cabinet.

Minerals.

also in the amorphous state. Schorlous Beryll has lately been discovered in Dumbartonshire, and added to this collection by Captain LASKEY—Common Schorl from Bohemia likewise found in Scotland.—Tourmaline from Ceylon and Brazil, found in Scotland near Banff. A very fine specimen above two inches in length, and the same in circumference, of the crimson red variety of Tourmaline, called Rubellite. it was first found in Siberia, and since by Col. Symes in the kingdom of Ava, and in Ceylon, by the Count de Bournon, and is very rare.

Thumerstone, first found at Thum in Saxony, whence its name.—See Case No. 1.—Quartz, in all its subspecies as Common Amethyst from Saxony and various other places—Thick Fibrous Amethyst in Agate Veins, found generally with the commonAmethyst—A beautiful rolled Nodule of Amethyst very pellucid, of the size of an hen's gg—Rock Crystal, many interesting and beautiful specimens, from the Alps of Switzerland, Dauphiny, &c.—Cairngorum, or Rock Crystal from Aberdeenshire, &c.—Common Quartz in all its various crystallizations. For an account of the beautiful variety called Avanturine, see page 39.

Prase from the Electorate of Saxony—Wood Stone, Flint, and many beautiful specimens of Chalcedony and Carnelian in all varieties of shade and colour. Agates, many varieties, as Fortification Agate, Landscape, Ribbon, Tube, Clouded, Zoned, Star, Fragment, Punctated, Petrefaction, Coraloid, Jasper. The finest Agates are found in Germany and in the greatest abundance; they are likewise found in France, England, Scotland, and Ireland.

Heliotrope from India, and some large Blocks from the Isle of Sky. Several varities of Cat's Eye from Ceylon and the Malabar Coast, the red coloured variety is the most valuable—Prehnite, from the Cape of Good Hope and Scotland—The fine varieties of Zeolite, Mealy, Fibrous, Radiated, Foliated, and Cubic, the whole of which are found in Scotland—Also a fine specimen of Zeolite, of a blood red colour beautifully crystallized, lately discovered in Dumbartonshire, and added to the collection by Captain Laskey; at present it is not ascertained to which of the subspecies it belongs, probably the Mesotype of Hauy or radiated Zeolite of Werner. Cross Stone from Andreasberg in the Hartz—Azure Stone, Lapis Lazuli of Kirwan. Lazulite Hartz, also from Persia, China, &c. Coccolite from Arendahl in Norway. See page 39.

4. Genus *Clay*.—Many beautiful specimens of the Egyptian, Striped, Porcelain, Common, Agate, and Opal Jaspers.

Opals of all the different subspecies. For a more particular description, see page 37, 38.

Pitchstone from Saxony and the island of Arran—Obsidian from Iceland.—Felspar, or Feldspar, compact and common—Adularia from Mount St. Gothard, frequently called Moon Stone.

Common Chlorite, from Altenberg in Saxony—Common and Labradore Hornblende, the first from Norway, the other from the island of St. Paul on the coast of Labradore—Green Earth from Bohemia.

5. Genus *Talc*.—Steatite, found principally at Cape Lizard, and in Scotland at Portsoy—Amianth, found in Sweden, Bohemia, Italy, &c. and likewise in Scotland—Common Asbest—Kyanite or Cyanite, from Switzerland and Aberdeenshire in Scotland—Common and glassy Actynolite.

6. Genus *Calc*.—Calc Spar from various parts, many fine specimens of Calc Sinter.—Slate Spar, from Konigsberg in Norway—Brown Spar from the mines in England, Norway, &c.—Appatit from Schneeberg in Saxony, this has also been found in Cornwall—Boracite, this has only been found in the upper part of the hill of Kalksberg, near Luneburg in Hanover—Fluor Spar, many varieties from Derbyshire—Gyps, several varities—Selenite from Oxfordshire and Sheppy island.

Saloon

Right Apartment.

Centre Cabinet.

Minerals.

7. Genus *Baryte*.—Witherite, from Anglesark in Lancashire—Baryte, or Heavy Spar, many subspecies.

8. Genus *Strontian*.—Strontian from Strontian in Argyleshire, the only place it has as yet been found in.

Class 2.—Fossil Salts.—Natural Glauber Salt, from Astrachan—Rock Salt, &c.

Class 3.—Inflammable Fossils.—1. Genus *Sulphur*—From near Naples and other places.

2. Genus *Bituminous*.—Saggy Mineral Pitch—Asphaltum, Hatchett in Linn. Trans from the Island of Trinidad—Bituminous Wood from Iceland, where it is called Suturbrand, it has likewise been found in the Isle of Sky.

4. Genus *Resin*.—Yellow Amber from West Prussia, Pomerania, &c.

Class 4.—Metallic Fossils.—1. Genus *Platina*.—Native Platina from South America, found in the two gold mines of Novitia and Citaria north from Choco in Pompajan and Citaria.

2. Genus *Gold*.—Native Gold from Hungary and Offenbanya in Transilvania—Gold yellow—Brass yellow, &c.

3. Genus *Mercury*.—Native Mercury, or Quicksilver from Idria—Natural Amalgam from Niederslana in Hungary—Mercurial Horn Ore or Corneous Mercury, from Morsfeld in the Palatinate, discovered about 30 years since in the mines there by Mr. Woulfe—Dark Red Cinnabar, Bright Red ditto, from Idria and various other places.

4. Genus *Silver*.—Native Silver from Schemnitz, Nagybanya, Bohemia, &c.—Antimonial Silver from Andreasberg in the Hartz—Arsenical Silver from the Hartz, &c.—Corneous Silver Ore, or Horn Ore, from Joachimsthal and Gottesgab in Bohemia, &c.—Silver Glance from Norway, Mexico, Peru, &c.—Brittle Silver Glance from Schemnitz and Kremnitz in Hungary, &c.—Dark Red Silver Ore from Andreasberg in the Hartz—Light Red Silver Ore from Freyberg, &c.—White Silver Ore from the Hartz and Bohemia—Black Silver Ore, ditto.

5. Genus *Copper*.—Native Copper, Cornwall and various parts—Variegated Copper Ore, from Norway, Saxony, Hungary, and various other places—Copper Pyrites, from Poldice and Dolcoth mines in Cornwall, Ecton mines in Staffordshire, in Derbyshire, Wales, &c. &c.—Grey Copper Ore, or Fahl Ore, from Transilvania, Freyberg, Norway, Spain, &c. &c.—Red Copper Ore, Upper Hungary, &c—Copper Azure, Tyrol, Transilvania, Thaliter, in Hesse, &c.—Malachite from Siberia, &c.—Copper Green from Krieglach in Stiria, and the Electorate of Saxony.

5. Genus *Iron*.—Native Iron, Siberia, See page 38.—Common Iron Pyrites—Radiated Pyrites—Magnetic Pyrites, the three last species widely diffused—Common Magnetic Iron Stone—Iron Glance—Red Iron Froth—Compact Red Ironstone—Red Hæmatite—Compact Brown Iron Stone—Brown Hæmatite—Sparry Iron Stone—Black Hæmatite—Pea Ore, or Pisiform Iron Stone.—All these species of the Iron genus are widely spread over the face of the globe—Jaspery Clay Iron Stone lately discovered in Dumbartonshire, and added to the collection by Captain Laskey.

7. Genus *Lead*.—Common Lead Glance, England, Scotland, Wales, France, Italy, and many other countries—Compact Lead Glance—Brown Lead Ore, at Meiss in Bohemia, &c.—Black Lead Ore, Lead Hills in Scotland, in Saxony, Bohemia, &c.—White Lead Ore, various parts of England, Wales, the Lead Hills in Scotland, Ireland, the Continent and Siberia—Green Lead Ore, nearly the same habitats—Lead Vitriol, or Vitriol of Lead, Wanlockhead, at Paris Mount in Anglesea, and in Andalusia in Spain.

8. Genus *Tin*.—Tin Stone, various specimens and crystalizations. In Europe there are only three Tin districts, the first is in the Erzgebirge, on the Saxon and Bohemia sides, and extends as far as the Riesengebirge and Fichtelgebirge. The second district is in Cornwall. The third is that of Galicia on the borders of Portugal.

9. Genus *Bismuth*.—Native Bismuth from the Electorate of Saxony and

Schneeberg and Johanngeorgenstadt in Saxony, and Joachimsthal in Bohemia; this is a very rare mineral; it has been confounded with green Iron Earth, from which it is well distinguished, not only by its external aspect, but by its accompanying minerals. Saloon. Right Apartment.

10. Genus *Zinc.*—Yellow Blende, from Schemnitz and Felsobanya also Bohemia, where the finest specimens occur—Brown Blende, widely diffused—Calamine, Derbyshire, Cumberland, and several other Counties in England, at the Hartz, France, Siberia, &c. Centre Cabinet.

11. Genus *Antimony.*—Native Antimony, from Andreasberg in the Hartz—Compact Grey Antimony Ore, from Freyberg, &c.—Radiated Grey Antimony Ore from the Hartz, found also in Cornwall, and at Glendinning in Dumfriesshire—Plumose Grey Antimony Ore, from Andreasberg and Clausthall in the Hartz, Electorate of Saxony &c.—Red Antimony Ore, from the mine called Neue Hoffnung Gottes at Braünsdorf. This very rare species of Ore occurs in veins along with the Quartz and Grey Antimony Ore; sometimes also with native Antimony, and White Antimony Ore. Minerals.

12. Genus *Cobalt.*—White Cobalt Ore found at Tunaberg in Sweden, and at Modum in Norway, in both places in beds which lie in Mica Slate, also in a similar repository and rock at Giern in Silesia—Grey Cobalt Ore, from Cornwall and Norway—Cobalt Glance, Schneeberg, Annaberg, and Johanngeorgenstadt in Saxony, &c. &c.—Indurated Black Cobalt Ore, found in Hessia, Saxony, Swabia, Austria, France, and in the valley of Gistain in Spain. It affords a most excellent blue colour; hence is highly valued as an Ore of Cobalt—Yellow Cobalt Ochre, found in Thuringia and other places—Cobalt Crust—Cobalt Bloom, found in Cornwall, at Alva in Scotland, Saxony, &c. &c.

13. Genus *Nickel.*—Copper Nickel; Cornwall, Norway, Sweden, the Hartz, &c. &c.

14. Genus *Manganese.*—Radiated Grey Manganese Ore; Devonshire and Derbyshire in England, near Aberdeen in Scotland, at Ilefeld in the Hartz, and other parts—Compact Grey Manganese Ore; Cornwall and Somersetshire in England, Saxony, &c. Used in Glass Manufactories to purify the Glass of all the substances that colour it—Red Manganese Ore, found at Kapnic in Transilvania, &c.

15. Genus *Molybdena.*—Molybdena, from Arendahl in Norway, found also in Sweden, Bohemia, and Saxony, and various other places. A fine specimen from Glenelg, Scotland, lately added.

16. Genus *Arsenic.*—Native Arsenic from Andreasberg—Common Arsenic Pyrites, from Cornwall, Norway, Hungary, the Bannat, and other parts; it is from this Ore the White Oxide of Arsenic is principally obtained, and artificial Orpiment is prepared from it—Argentiferous Arsenic Pyrites, it is a rare fossil, and has been hitherto found only at Braünsdorf, and Freyberg in Saxony, Rathhausberg in Gastein, in Saltzburg, and in Chili—Red Orpiment from the Hartz—Yellow Orpiment found at Nagyag and Felsobanya in Transilvania, Wallachia, &c. &c.

17. Genus *Scheele.*—Wolfram, from Altenberg in the Electorate of Saxony, and Bohemia.

19. Genus *Uran.*—Pitch Ore, or Uranite, found at Johanngeorgenstadt, Schneeberg, and Wiesenthal in Saxony, Joachimsthal in Bohemia, and Konigsberg in Norway—Uran Mica, from Saxony, in the Bannat, &c.

20. Genus *Sylvan.*—Native Sylvan, it has been hitherto only found at Facebay in Transilvania; it is known also by the names of Aurum Problematicum, Paradoxium, and White Gold Ore—Nagyker Ore, or Black Sylvan Ore, found only at Nagyag in Transylvania—Coccolite from Arendahl in Norway.

MISCELLANEOUS.

On the top of the Cabinet are placed nine Bell Glasses on stands, containing Etruscan ware; the centre one contains a Patera, or dish and cover, with a Miscell.

Saloon.

Right Apartment.

stand. On each side a drinking cup in the form of the head and neck of a grey-hound, very elegantly modelled and painted, with a handle; the others contain small vases of elegant forms, they are all supposed to be of antique Grecian workmanship, and of great rarity.

At the end of this Cabinet, facing the Saloon, is placed another Egyptian Monument similar to the one in the left apartment, and ornamented with the same description of hieroglyphicks, or sacred language of Egypt.

Miscell.

Among the various miscellaneous articles in this room we notice two valves of the great CLAMP SHELL, (*Chama Gigas*, Linn.) or GIGANTIC COCKLE, from the Island of Borneo; one of these enormous shells weighs 132 lbs. the other about 99 lbs. A view of these specimens will easily reconcile us to the seemingly extravagant assertion of voyagers, who mention their having dined on a cockle sufficiently large to feast a whole boat's crew. This is the largest known species of the Testaceous tribe.

A small specimen of the FLYING GURNARD, (*Trigla Volitans*, Linn.) This beautiful species is a native of the Mediterranean, Atlantic, and Indian Seas, where it swims in shoals, and is often seen flying out of the water, in the same manner as the flying fish. In its native element the colours of this fish are extremely elegant and brilliant; it is crimson above, pale, or of a white colour underneath; (from age it has now lost its colours;) the pectoral fins are very large, transparent, of an olive green, richly varied with numerous bright blue spots; the tail is pale violet, with the rays crossed by dusky spots, and strengthened on each side the base by two obliquely transverse bony ribs or bars. The pectoral fins in fine preservation, spread on paper, are in the Museum.

A Glazed Frame with twelve HIPPOCAMPI, or LITTLE SEA HORSE, from the Mediterranean.

CANCER SPINOSUS, or SPINED CRAB, a very rare species; at times occurs in the European Seas.

SURINAM TOAD. (*Rana Pipra*, Linn.) This disagreeable, though singular animal, is from Surinam, whence its name. It produces its young by the means of small tubercles situated on the back of the animal. This specimen displays the tubercles and embryos in a very perfect and distinct manner.

BIRD CATCHING SPIDER, (*Aranea Avicularia*, Linn.) A description of this species is given page 23.

DOUBLE COCOA NUT, named by Linnæus junior, (*Borassus Macrocarpus*,) from Praslin Island, New Guinea. See Sonerat. Voy. pl. 3. page 4. Also fig. in Calceolari's Mus.—Grew, in his history and description of the rarities of Gresham College describes it as "being found on the Malabar coast, and "that the natives have a high opinion of it as of great virtue against most "diseases, especially in cases of poison, epileptick, and other like affections, "so that sometimes they value them at about L.25 sterling each nut; 'tis also "highly commended for the same purposes by Piso. They sometimes make "drinking cups of the shell, and tip them with silver or gold plate. It is "death for any to be known to take up any of them, because those things "that are cast on the shore are the king's. They are found, it is said, no "where but on the sea shore, nor is the tree itself to be seen any where in "the Island. The entire nut resembles a pair of paniers; the shell is about "one fifth of an inch thick, and as hard as a cocoa nut, as black as a coal, containing a certain white pulp of no great taste."

Specimens of the BOLETUS IGNIARIUS from the Highlands. Of this fungus a tinder is prepared by bruising and beating out the woody parts, the remainder is boiled in a lixivium of saltpetre and pure water, then dried, when it is fit for use. It is commonly known by the name of German Tinder when in this state; below is a specimen with its history.

NEST of a species of Banana Bird from America.

In the Glass Case on the right of the Corals are various specimens of the shells of Tortoises, uncommon Crabs, and Star Fish.

Saloon.

Among the Tortoises are several shells of the GEOMETRIC TORTOISE, (*Testudo Geometrica*, Linn.) From its strong and well-contrasted colours, and regularity of pattern, the present species is more readily distinguishable at first view than most others of this perplexing tribe. The native country of this beautiful Tortoise is perhaps not truly known; though the shell is more frequently seen in Europe than that of any other kind.

Right Apartment.

Several specimens of the CARVED ASTERIAS, or MINCE-PIE STAR FISH, (*Asterias Reticulata*, Linn.) Is a native of the Indian Seas, and is found of various sizes, from one to six inches in diameter.

Miscell.

MISCELLANEOUS ARTICLES

Contained in the Glass Cases in the recesses of the Window, marked 13, 14, 15, 16, 17, *and* 18.

No. 13. A Quey, or small Apron, worn by the Indian women on the Coast of Africa, made of glass beads of various colours.

Another much smaller, of the same materials.

Two Eggs of the Alligator, from the West Indies.

Antique Flint Arrow head, found in the Glebe of Forglin in Banffshire.

Three Antique Silver Coins, being part of about 1300 found in ploughing a field at Newry in Fifeshire, 1810; are supposed to be of that species of coinage called Counterfeit Sterlings, being a fabrication of the Continent in imitation of the English Coins of the Saxon Heptarchy. In same frame a beautiful specimen of Ivory Chain, cut from one solid piece; each link is polished, the original Chain was above a yard in length, from China; added to the collection by Captain LASKEY.

A pair of Silver Spurs said to have belonged to Col. Gardiner who was killed at the Battle of Prestonpans, lately added to the collection

A Singular Cap, said to have been worn by a native Prince of Africa, who was captured and sold for a slave.

Specimens of the Betel Nut from East Indies; it is much used all over the East, by chewing. Their way is to cut one of these nuts into four pieces, and wrap each in an arek leaf, spread with a soft paste made of lime of calcined shells, which they call Chinam; it is then chewed all together. Every man in these parts carries his lime box by his side, and dipping his finger into it spreads it over his betel and arek leaf. The arek is a small tree or shrub with a green bark, and the leaf is long, and broader than a willow; they are packed up for sale to those parts that have them not to chew with the betel. The betel nut is most esteemed when it is young, and before it grows hard; it is then only cut into two pieces, with the green husk or shell on it. It is then exceeding juicy, and makes them spit much, it tastes rough in the mouth, and dyes the lips red, and makes the teeth black; but it preserves them, and cleanseth the gums. It is also accounted wholesome for the stomach, but at times will cause a giddiness to those not in the habit of using it. The nut grows on a tree like the cabbage tree, but is not so large nor so high. The body grows straight about twelve or fourteen feet in height, without leaf or branch except at the head. There it spreads out into long branches, as the cabbage tree, the cocoa nut, and the palm; these branches are about ten or twelve feet long; on the top among the branches grows the betel nut on a tough stem, in clusters, about forty or fifty in number. It is bigger than a nutmeg, and is much like it, but rounder. This is the account Dampier in his Voyages gives us, and we have no doubt of its correctness.

No. 14, Nest of a Humming Bird and its Eggs. For a description of this article, see page 11.

Two Egyptian Penates of the Goddess Isis, in red baked earth from the catacombs of Saccara. De Non, in his Travels in Egypt, says, these penates are for the purpose of resting the mummies on, having found them in layers in

Saloon. great numbers in the catacombs of the Temple of Medinet Abbe, at Thebes in Upper Egypt.

Right Apartment. Bones of a Bat under a small bell glass.

Bowl of a Turkish Tobacco Pipe of red clay, in which particles of gold are mixed.

Miscell. Part of the Tusk of an Elephant, which, on cutting up, an iron bullet was found embedded in it, with which at a former period the animal had been shot.

Another specimen without the ball.

A small fragment of Pompey's Pillar from Egypt,

Seed Pod of the Hura, or Sand Box Tree; West Indies.

Leg of the Royal Antelope. This animal is not above the height of 9 or 10 inches; their legs are frequently tipped with silver, and used as tobacco stoppers; they are natives of Africa.

A large and fine specimen of the Hippocampi, or Sea-Horse Fish, from the Mediterranean Seas.

Two small Cups with Handles, supposed to be of the rice preparation from China. It has been disputed whether this preparation is actually of rice or a species of steatite earth; or, as some allege, both articles combined. The writer is of opinion it is a steatite earth, of the species named by Jamieson in his Mineralogy, Figure stone, alluding to the Chinese figures, &c. formed with it.

Three singular distorted Eggs of a Hen, two of which were laid in the neighbourhood of this City, 1813.

A small Bone of the Ibis Bird. This was taken from the small Ibis Mummy in the original coffin, on the stair case leading to the Hall of the Elephant, and distinctly proves these small mummies were not those of children, but of their sacred bird, the Ibis

A Chinese Spoon, cut from the Columella of a Melon Shell.

Bony Tongue of the Raia Pastinaca, from South Seas; a curious article, and strongly illustrates the fossils found at Sheppey Island and other parts, supposed to have been fish palates.

Peacock Feather Stones. This is a fabrication of the German and Dutch Lapidaries to impose on the unwary Collectors, passing them off as a specimen of a variety of the Labradore Spar. In fact it is nothing more than the hinge of the Black Pinna Shell from Otaheite; specimens unworked may be seen in the same Card.

No. 15. contains a variety of antique Roman Weights, in Bronze, and a fine specimen of the Head of a Roman Insignia; most of the Weights have the Janus head on one side and the prow of a Roman vessel on the other.

No 16, 17, and 18, contain a variety of RECENT ECHINI, or SEA EGGS, with their Spines, among which are,

Echinus Orbiculus, or Pancake Echinus, var. with 2, 5, and 6 holes, very rare.

The Purple Anemony Echinus, with its Spines complete, rare.

Echinus Esculentus, Northern Sea.

Echinus Cidares, East Indies.

Echinus Diadema, from Grenada.

Echinus Virescens, from Greenland.

Echinus Lacunosus of Pennant, tab. 35. Weymouth, scarce.

Echinus Placenta, a very large specimen, 9 inches by 7 in diameter.

The beautiful Spines of Echinus Atratus. The purple club-spined Echinus, from the East Indies, very rare,

Echinus Mamillatus, Mamillated Echinus, from the Red Sea, rare.

A curious and rare species of Echinus of a lilac colour; unnamed, from China.

Spines of Echinus Mamillatus, var. of a triangular shape and brown colour, from Madagascar,

A most beautiful Spine of an unknown Echinus of a delicate and velvety texture, supposed from the South Seas, excessive rare, in Case 18. Saloon.

At each corner of the window are placed large glasses, containing several rare and curious animals in spirits, among which are the Right Apartment.

TARSIER, a singular little animal; is remarkable for the great length of its hind legs, in which it resembles the Jerboa; has four slender toes, and a distinct thumb on each foot; its visage is pointed; eyes large and prominent; ears erect, broad and naked; its hair is soft and woolly, of a deep ash colour, mixed with tawney; its length, from the nose to the rump is nearly six or seven inches, the tail is about nine inches long, round, scaly, almost naked, like that of a rat, and tufted at the end. It is found in some of the remote islands of India, especially at Amboyna; it is very rare. — Miscell.

A remarkable fine specimen of ASTERIAS MULTIRADIATA, from the Indian Seas.

A fine specimen of the GALLIWASP LIZARD, Jamiaca.

The SURMULLET of Buffon, or WOOD RAT, a singular animal.

In a handsome Glass Case made for the purpose, and running on castors, is preserved a magnificent specimen of RADIATED ZEOLITE the STILBITE DODECÆDRE of Mons. Hauy. Presented to the Museum by Sir GEORGE MACKENZIE, who brought it from the Feroe Isles last summer.

HALL OF ANATOMY.

Hall of Anatomy.

ANATOMICAL DEPARTMENT.

It is impossible, in a publication of this kind, to give any accurate idea of the number and value of the Preparations contained in so vast and splendid a collection; it is merely intended to describe a few of each class, and point out the situation where each division of the Preparations may be found.

The following description, which commences with the Preparations on the Table, proceeds to those preserved in spirits, placed in the different presses, on the left hand when entering the Hall, from which it continues with the divisions on the North, East, and South, terminating with that on the West, or left hand, when retiring.

PREPARATIONS ON THE TABLE.

Table.

HEART and LUNGS.—There are a few injected Preparations of the Heart, shewing its natural size, and the relative situation and proportion of its different cavities, also the large vessels by which it receives, and transmits the blood to the various parts of the body.

No. 58. The Heart and Lungs corroded, from a young subject. The right side of the heart, or that side which receives the blood from the body, and transmits it to the lungs is green, the pulmonary artery, with its ramifications through the lungs, are of course green. The left side which is the one that receives the blood from the lungs, and sends it to the different parts of the body is red; the pulmonary veins are therefore red, the trachea and its branches are brown. Very elegant preparation.

No. 59. A Corrosion of the Lungs; the artery red, the veins yellow, trachea green; not minute, but distinct, and colours very fine.

No. 60. The Heart with the Pulmonary Arteries and Veins injected red, from a child at birth; the ductus arteriosus is distinctly seen. CORROSION.

KIDNEY—No. 4. B.—A corroded Kidney; the arteries red, the veins white, the pelvis brown; the smaller vessels are destroyed that the principal trunks might be seen.

Hall of Anaromy. Table.

No. 4. I.—A corroded Adult Human Kidney; the arteries red, the veins green, the pelvis brown; this is a very beautiful and minute preparation.

No. 4 K.—A corroded Adult Human Kidney; the arteries red, the veins yellow, and the pelvis with the ureter black

No. 4. O.—A pedestal with a number of Pelvises, red; in some it seems much larger than in others, the infundibula or branches of the pelvis have little cavities at their tops, corresponding to the number and projections of the mamillæ

Liver.—No. 9. C.—A most beautiful corroded preparation of the Adult Human Liver; the artery is injected white, the vena porta red, and the pori biliarii yellow, the venæ cavæ hepaticæ are green, as is the vena cava inferior; the red and green colours predominate, the artery and pori biliarii follow every where the ramifications of the vena porta, and seem as it were to surround it.

No. 9. A.—A corrosion of the Liver supported on the trunk of the vena cava, and seen on both sides; the arteria hepatica black, vena portarum red, pori biliarii yellow, and venæ cavæ hepaticæ green. The injection of all the ducts very complete.

No 9. E.—An elegant and minute corrosion of the Liver; it rests on its upper or convex side, of course the under side is only seen. The artery is white, the vena porta green, and the gall ducts yellow, with the cava red. The cava is seen lying behind the liver, and is very complete. The hepatic duct is seen of its natural size, and nearly its whole length.

Skulls.—There are two Skulls under glass covers of patients who have been affected with lues venerea. Their irregular surface, with the innumerable bony spicula give them a peculiar and beautiful appearance.

Skull of a Child affected with Hydrocephalus. The upper part of the cranium is very large in comparison with the jaws, and the bones are a good way separated from each other, with a thin membrane intervening, in different points of which there are small portions of bone formed, a sort of attempt to complete the bony compass as soon as possible.

Miniature Cast of Muscles.—This beautiful little figure, placed under a glass cover, gives a very accurate idea of the muscles of the human body.

Cast of Face and Neck in wax.—This cast shows the muscles and large blood vessels of the neck and face. The arteries of the face are painted red, the veins yellow, and the parotid gland and duct white.

A section of a Calculus, or Stone from the stomach of a horse, taken out in the year 1740, weighing 6 lb. 6 oz. the nucleus a small nail.

A very perfect skeleton of the Tiger is placed on the south end of the table; and the skeleton of a small Horse, with that of the Boy who rode upon him, are erected on the North end.

PREPARATIONS IN SPIRITS.

Presses. West Side. Right Hand.

The presses on the left hand as you enter the apartment contain Preparations of the Kidney, Bladder, of Aneurism, and a series on the growth and developement of the Chick in ovo

Kidney.—There are above 120 preparations of the Kidney, illustrative of its structure and diseases.

No 4. One half of the Lion's Kidney, injected red; has but one nipple, as it were the tubular portion; shews the most simple Kidney.

No. 16. Kidney of the Bear, injected red, to shew that it is lobulated or conglomerated, every single lobule having a nipple of its own, and an infundibulum or branch of the pelvis distinct from the rest.

No. 39. One half of an Adult Human Kidney injected red, shews the convolutions of the arteries, and the mamillæ projecting into the pelvis; the nipples are the pyramidal tops of the tubular portion, and are perforated by a number of holes, the terminations of the excretory ducts of the Kidney.

No. 44. A section of the Wolf's Kidney, where the tubular portion, though united and simple, in the middle is on each side separated into seven mamillæ. Hall of Anatomy.

No. 45. One half of the Adult Human Kidney beautifully injected red; the injection passed from the artery into the veins, and also through the tubuli urineferi into the pelvis, having performed the round of the secretion. The tubuli are easily distinguished from the arteries, which run toward the point of the nipple becoming smaller; whereas the former by uniting with each other become gradually larger. In this preparation the cryptæ appear most evidently to be convoluted artery. Presses. West Side Right Hand.

Bladder.—No. 3. One half of the Human Adult Bladder previously distended, and hardened with spirit, to make it retain its shape. A bristle is introduced into the lacunæ of the caput gallinaginis, near which the orifices of the vesiculæ seminales are seen. In the lower part of the bladder the orifice of one ureter is seen about an inch and a half behind the last mentioned orifices. On the edge all round the upper half, may be seen the peritoneal coat externally, the internal may also be seen, with the muscular coat between it and the peritoneal.

No. 28. A portion of Bladder with Prostate Gland, and beginning of Urethra. On the side of the caput gallinaginis appear small round stones, naked towards the urethra, and surrounded by a ragged ulcerated surface; these probably would give the stroke to the sound in searching, and would be mistaken for stone in the bladder.

No. 55. A very large thickened Bladder opened. The posterior part of the prostate swelling into the bladder forms an eminence behind the caput gallinaginis, and often prevents introduction of the catheter. The inner coat is formed into pouches, in which are seen white stones to the number of fifteen or twenty, some of these are as large as a small gooseberry.

No 44. Ulcerated Bladder much contracted in size. There is a fistulous orifice just before the caput gallinaginis leading to the perinæum. At the upper part of the bladder the ulceration had gone through to the peritoneal coat, and formed an arch which was guided by the ligament urachus to the navel, where it opened externally, so that matter was discharged, and probably urine both at the navel and perinæum.

Anatomy of Incubated Egg.—This very interesting and beautiful inquiry is finely illustrated by these elegant preparations

No. 1. The Yolk of an Egg inclosed in its proper membrane. On the side next the great end of the shell is a twisted gelatinous cord, and on the opposite side is another. These are not exactly opposite to one another, but one of them is inserted obliquely into the membrane.—These cords have been called Chalazæ, and perhaps answer the purpose of oblique muscles.

No. 4. An Egg Shell having half an inch of its length removed from the great end, shewing a diaphragm-like membrane stretching across.—This serves to give an idea of the air bag, and shews that the air is not in contact with the white nor yolk.

No. 5. A portion of the membrane of the Yolk stretched on blue paper.—Under it is seen a white spot whose diameter is that of a small pea. This spot is never perceived in the yolk unless the hen has received the male, and is named cicatricula.

No. 8. A portion of the membrane of the Yolk six hours after incubation. Embryo a small white hair, an eighth of an inch long.

No. 10. Membrane of Yolk at eighteen hours. Embryo seen distinctly. The rudiments of the spine, the heart, the brain, and spinal marrow in the microscope.

No. 18. Do. at forty-eight hours. The vascular system very evident. Towards the lower end of the spinal marrow is a small opaque point which

Hall of Anatomy.

Presses. West Side. Right Hand.

enlarges afterwards, and becomes vesicula umbilicalis; or the investing membrane, which is double, and between its duplicature forms alantois.

No. 19. A most elegant Do. the principal blood vessels run from the middle of the embryo to the one side and to the other, and resemble trees with very bushy heads. The vascular circular border is inconceivable. It looks like a large circular blood vessel, into which all the others terminated, and as if it were placenta, to which all the arteries went, and from which all the veins returned.

No. 37. A most beautiful preparation of a Fœtus, with membranes on the sixth day; amnios very distinct.

No. 42. Whole contents of the Egg (8th day) hanging by one of the chalazo, now thick and strong, and which had contracted a strong adhesion to the small end of the shell. Vesicula umbilicalis has enveloped the fœtus, the yolk in part, and seems to inclose also the white.

No. 56. Contents of the Egg turned out of membrana umbilicalis, which is left lining the inside of the shell, and seen beautifully injected with its own blood coagulated by distilled vinegar.

No. 57. Contents of the Egg entire, (14th day). That the membrana umbilicalis is a double membrane, and is alantois, appears from the urine which is thick like chalk and water.

No. 60. Fœtus, (16th day). Completely covered with feathers, the yolk in its membrane hangs by the ductus intestinalis, the umbilical membrane by the urachus; there is besides a small vesicle full of fluid in the line of one of the large blood vessels of the last named membrane, perhaps more properly styled vesicula umbilicalis.

No. 63. Fœtus on the 18th day. Almost perfect, albumen all gone, and yolk beginning to be drawn into the abdomen. The vessels of membrana umbilicalis also shrinking.

No. 65. Fœtus, (20th day). Now hatched; parietes of thorax and abdomen removed, to shew the situation of the yolk now taken in. The fœtus hangs by ductus intestinalis and urachus

Aneurism.—This collection contains not fewer than sixty Preparations on this important subject, the greater part of which are most elegantly dissected, and preserved in spirits, and a few in a dry state.

No. 2. The Trunk of the Aorta from an Adult. Aorta ascendens seen aneurismal about the middle of its arch, the sac equal to a child's head at birth, the under side full of lamellated firmly coagulated blood; the upper part contained fluid blood, but is now empty.

No. 2. a. An Aneurism in the arch of the Aorta about the size of an orange. The two carotids are separated two inches from each other by the distension of the bag; behind an opening has been made shewing coagulated blood, and the trachea is left remaining, to mark more precisely the relative situation.

No. 8. A section of the largest superior portion of Aorta, from its origin out of the heart, to its passage through the diaphragm. Just as it passes the root of the lungs it dilates into an aneurismal sac, capable of containing one's fist, the orifice leading from the aorta into this cavity is about an inch and a half long, and one inch broad; it had formed a bed for itself in the posterior side of both lungs, and was at first sight mistaken for a vomica.

No. 12. A very large Aneurism in the trunk of the left Subclavian Artery the sac, as large as a child's head at birth (or larger) is turned inside out, the coagulum all removed. Quills are introduced into the sound portion of the artery from the cavity of the sac.

No. 13, 19. Coagula from some of the above Aneurisms, shewing different degrees of firmness in the laminæ and different degrees of cohesion to one another, shewing them to be more or less recent.

No. 20. A very large Aneurism in the middle of the Femoral Artery, the orifice is about the size of a half crown; the artery above and below this is slit open, to shew that every where else it was sound.

Hall of Anatomy.

No. 24. The upper end of the Tibia, and lower end of the Femur, also a portion of the Fibula. An aneurism in the popliteal artery about the size of an orange, is cut open upon a bougie passed through the artery, which is exposed in its passage at one place, viz. the orifice from the artery into the sac.

Presses. North End.

No. 34. Four Lumbar Vertebræ, where the bodies have been absorbed from the pressure of an aneurism, and even the canal of the spinal marrow laid bare. The intervertebral substance is entire, being less liable to be affected by pressure.

NORTH END OF HALL.

Gravid Uterus.—There are above five hundred Preparations under this division. They are prepared with the greatest taste and care, are exceedingly beautiful, making this department the most valuable perhaps of any in the world. Many splendid and valuable engravings were taken from these, and a volume of them published under Dr. Hunter's superintendance

No. 6. A transverse section through the thickness of the Uterus at the 9th month, macerated in water, and a little spread out to shew the substance of the uterus, principally vessels, and now that it is a little unravelled, two or three inches thick.

No. 31. A portion of Uterus at the place where the Placenta adhered, the orifices of the torn veins full of large plugs of coagulated blood.

No. 38. A beautiful Cervix Uteri, shows the rugæ pennatæ well, and the follicles of the os tincæ passing some way up the cervix.

No. 48. A section of Corpus Luteum highly injected red; the cavity is white, and carries no vessels apparently, but the surrounding glandular substance is very vascular. At some little distance is seen the remains of a former corpus luteum, in which the glandular substance is lost, and a mere cavity remains.

No 66. A Child at Birth, inclosed in its amnion, with its placenta exceedingly perfect. Chorion also adhering, but removed at one part, to shew the amnion more transparent underneath, and the fœtus more distinct under it.

No. 160. A Placenta injected from the Navel String, red, to great minuteness, and most entirely unravelled, shewing a most beautiful shag of vessels.

No. 193. An Uterus about the fourth month, most minutely and beautifully injected. A considerable portion is cut off from the side of the uterus, and the decidua is likewise removed to shew the fœtus through the transparent membrane. The fœtus is not at all injected, although the uterus has been injected very minutely. The cavity where the fœtus is kept, distended by spirits.

No. 367. An Uterus where there had been an Ovum in one of the Fallopian Tubes. The Fallopian tube is distended to nearly the size of a hen's egg, and has been ruptured probably;—the ovum passing out into the cavity of the belly. What is remarkable is the increase of the uterus, as if it contained an ovum and the decidua, which is clearly proved by this preparation to be formed by the uterus, and to be independent in some measure of the ovum.

EAST SIDE OF HALL, LEFT HAND.

Presses. East Side. Left Hand.

Monsters.—*Deficiency.*—*Redundancy.*—*Deformity.*—On this subject there are above sixty Preparations, many of them exceedingly remarkable.

No. 33. Two Children about the seventh month (apparently) growing together by the chest and abdomen.

No. 56. A Child without head and without arms. The skin too appeared to be covered with a very long down, and resembles somewhat a Pig's skin. There appears to be no heart, lungs, diaphragm, or liver, but the whole cavity seems filled with intestine only.

No. 57. A Monster very much resembling the former. There seems to be no head nor arms. There is one general cavity of thorax and abdomen, un-

Hall of Anatomy. Presses. East Side. Left Hand.

distinguished by diaphragm, in which there is no heart, lungs, &c. Its system of vessels is injected; one, which as soon as it had perforated the navel, divides itself into four branches, two of which go to the upper part, and two to the lower extremities; and one vessel running along the spine. These had carried on the circulation by their own powers of contraction, during the whole period of uterine gestation, for the child seems to have been born at its full time.

EAST SIDE, LEFT CENTRE PRESSES.

This division contains Preparations on the structure and diseases of Arteries —Small Intestines—Spleen and Pancreas.

ARTERIES.—No. 10. A section of the Aorta above the diaphragm turned inside out, and the thin inner coat transparent, and without fibres, peeled off and hanging down.

No. 12. a. A portion of the Aorta from an Ox, divided into its internal transparent coat, middle circular coat, and external cellular one.

No. 13. A section of the Aorta of an Elephant. A little below the curvature it is about four inches in diameter, and the thickness of the coats taken together is about half an inch.

No. 14, 15. Portions of Arteries which had been injected red, but had the red injection afterwards drove out to make way for a green one. In consequence of this management, the small vessels of the artery itself termed vasa vasorum, and from which the first injection could not be expelled, now become visible, and are exceedingly numerous.

No. 15. A portion of the Aorta of a child, peritoneal (or pleural) coat stripped off, it was injected red, slit and dried; shows the vasa vasorum very distinctly.

No. 16. The Aorta of a Turtle slit open to shew the internal fasciculated muscular coat.

No. 20. The three coats of a section of the Aorta; the inner coat is in most places opaque, and as it were clouded, shewing the beginnings of ossification.

SMALL INTESTINES.—On this subject there are nearly three hundred Preparations, and many of those injected, very splendid.

No. 4. A portion of small Intestine filled with spirits, which are confined by ligatures, the peritoneal coat is in some places turned down, as is the muscular, to shew longitudinal muscular fibres running under the peritoneal coat, and circular muscular fibres under the longitudinal; the circular seem to be infinitely more numerous.

No. 7. A portion of Intestine distended by spirits, slit open; the preparation hangs by a cuticular kind of internal coat which has in it the orifices of the intestinal glands; below this the villous coat is turned down some way, and still lower down the muscular, with the peritoneal, are turned down; it shews the different coats of the intestines.

No. 9. A portion of Jejunum from an adult; it is opened to shew the villous coat of the intestines, like that of the stomach in the contracted state of the muscular coat, throwing itself into wrinkles which run in the direction of the circular fibres, and are named valvulæ conniventes.

No. 13. A portion of small Intestine from the Crocodile; the valvulæ conniventes are longitudinal, exceedingly small, and form waving lines so as to represent the drawing of a storm at sea.

No 16. A portion of Jejunum cut open, highly injected red; in the microscope every valvula conniveus appears covered with smaller ones, which in dogs put on the appearance of hairs, and are called villi in both animals.

No. 20. A portion of Jejunum with Mesentery; the arteries injected red, the veins white, remarkable for its distinctness, both arteries and veins are seen anastamosing and forming a net work round the intestine.

Hall of Anatomy.

No. 37. A portion of Intestine from a Child, slit open, shews the villi beautifully and minutely injected red, and here and there amongst these villi the glandulæ agminatæ of anatomists are seen.

Presses. East Side. LeftCentre

No. 42. The Villous Coat only. Tore off to shew a number of glandulæ solitariæ.

No. 55. A Diverticulum or Cæcum, in the Jejunum of a man hanged at Tyburn, four inches long, and near two inches in diameter.

SPLEEN.—No 3. The Spleen of a little Child injected red, and macerated in water, shews its floating vessels very minute, (after the style of Ruysch.)

No. 10. The Spleen of the Antelope inflated from the veins, and after drying, cut open to shew that the trunk of the vein opens into cells.

No. 15. A large Schirrous Human Spleen, six or seven times the natural size.

PANCREAS.—No. 1. The Pancreas from an Adult Subject, with that portion of the duodenum where its duct enters; it is about nine inches long, and one and a quarter broad, is conglomerated or clustered externally.

No. 2. Pancreas without Duodenum; the cellular membrane connecting its lobules is a little destroyed by maceration, to shew its conglomeration more perfectly.

No. 10. The Pancreatic Duct of the Elephant, slit open on each side, the lower extremity of each half is sewed together, it makes a tube as large as the cava inferior of a man; the fluid it contained in the dead animal was not unlike bile, and gelatinous.

No. 10. Stony Concretions in the root of the Duct of the Pancreas, resembling those found in the salivary glands. The gall duct is seen opening with the pancreatic duct into the duodenum, many parts of the concretion resemble a corroded injection of the duct.

EAST SIDE, RIGHT CENTRE PRESSES.

Presses. Right Centre.

In this division there are preserved preparations of Œsophagus and Stomach, Large Intestines, Liver and Gall Bladder.

ŒSOPHAGUS AND STOMACH.—No 1. The Œsophagus inverted to shew its villous internal coat; also filled with spirit, to give some idea of its size.

No. 3. Ditto, slit open, with a portion of Stomach highly injected red, shewing a cuticular covering of the œsophagus, under which is the villous surface.

No. 5. The lower end of Œsophagus in a Quadruped (Leopard) with the upper orifice of the stomach, the cuticular lining of the œsophagus appears wrinkled, and terminating by a circular border just within the cardia.

No. 6. A portion of the Œsophagus and Stomach of the Turtle; the œsophagus internally is beset with strong thick villi, an inch in length and one eighth in diameter. Their points are turned towards the stomach, and their thick bases towards the mouth. They are insensibly lost at a little distance from the stomach, at least are much thinner and smaller; their use is supposed to be that of preventing any animal taken down, from getting up again.

No. 13. A Section of the Gizzard of a Goose, to shew the prodigious thickness of the muscular coat; in some places three inches thick.

No. 16. The Stomach slit open to shew the internal coat thrown into rugæ, like the convolutions of a bird's intestines, in consequence of contraction in the muscular coat.

No. 23. The internal surface of the Stomach from an Adult, the arteries injected red; instead of villi, when examined in the microscope, the arteries appear to form cells, so as to give the appearance of honey-comb to the whole surface.

No. 28. The Stomach of a Child at Birth inverted, both arteries and veins injected red from the umbilical cord; nothing can be more uniformly red, nor is there any ruptured vessels upon the whole surface; the arteries form

Hall of Anatomy.

the honey-comb appearance every where, except at or near the pylorus, where they resemble the appearance in the small intestines, or are villous. It is distended with spirits.

Presses East Side Right Centre.

No 32. A portion of the Œsophagus and Stomach from a Woman who poisoned herself with arsenic; the stomach was very much inflamed, and the glands, by this means visible, are very distinct toward the lower end of the preparation; on the right side the cuticular lining of the œsophagus is also seen terminating at the cardia.

No. 34. Lower end of the Stomach with a considerable part of the Duodenum distended previously with spirits; and after being thus hardened, opened at several parts to shew the valve of the pylorus, part of the cavity of the stomach and duodenum, the opening of the ductus communis choledochus into the duodenum is also seen, and a bristle is passed through the duct.

No. 38 The four Stomachs of a Goat; they are inverted to shew their natural surfaces; the first is villous; the second like the cells of a honey-comb; the third like the septa in an orange, only villous; and the fourth not very unlike the human.

No. 42. A portion of Œsophagus of a person who died in a few days in consequence of accidentally swallowing a half crown piece; it stuck just behind the left auricle of the heart; a bleeding from the stomach destroyed him. The half crown is seen sticking in the œsophagus, and now black from a kind of rust.

No. 42. b. The Stomach of a Lobster; three teeth are seen in its cavity, two of them resemble the grinders of an Elephant in miniature, the third has something of the dens caninus; these adhere by their roots to the internal surface of the stomach, and are opposed to each other like mill-stones.

No. 42. a. The Œsophagus of a man who died of Hydrophobia, (with a portion of the Stomach.) The upper part of the œsophagus, and the lower part formng the cardia, are exceedingly inflamed; the stomach itself is much redder than natural, the inflamed appearance was preserved by steeping the parts in distilled vinegar.

No. 42. b. A portion of the Stomach from a Woman who died of Peritoneal Inflammation; the great end of the stomach was reduced almost to a jelly by the powers of the gastric juice; the small end of the stomach is natural and sound, the gastric juice falling to the great end by its gravity.

No. 42. h. A portion of the Ostrich's Stomach, with a hole with callous edges in it capable of admitting one's finger. He had swallowed a large wooden peg, which on opening the body projected an inch through the stomach. The injury seemed by no means recent, and as the stomach and abdomen were not inflamed, it was doubtful whether it was the cause of death or not.

No 43. Part of the Œsophagus and Larynx of an Adult who swallowed a cherry-stone, which sticking by the way, gave occasion to the formation of a pouch in the œsophagus a little within the thorax. The œsophagus is now slit open from behind to shew the bag; every thing he swallowed stuck there after the cherry-stone had once made a lodgement.

No. 44. A portion of Œsophagus. The part close to the stomach was of a hard gristly substance, so contracted at one part as just to admit a small quill, forming stricture of the œsophagus.

No. 50. A portion of Stomach, in which is seen a pouch formed by five halfpence sticking together, black, and seeming on their under surfaces to have been rubbed bright by the action of the stomach.

No. 54. A longitudinal section through Œsophagus, Stomach, and Pylorus, from an old woman, every where thickened and schirrous; the cavity of the stomach was not more than that of a small intestine.

Great Intestines.—No. 4. The Caput Coli, Appendix Cæci Vermiformis, with the lower end of the Ileum.—These were prevoiusly distended with spirits, and when hardened, a considerable portion was removed on one side, that the entrance of the ileum into the colon, which is nearly at right

angles, might be seen; the villous coat of the ileum seems reflected back on the colon after its entrance, which is by means of a slit in the direction, and as it were between the circular fibres of the colon, on the side next the sacrum.

No. 18. a. Lower end of the Ileum, Caput Cæci, and Appendix Cæci Vermiformis, slit open. The agminated glands of ileum and the scattered do. of cæcum, and particularly in the appendix, were exceedingly distinct when the preparation was first put in spirits, still tolerably distinct in the appendix.

No. 20. The internal coat of the Rectum spread out on blue paper. Shews the follicles exceedingly distinct, they appear to be aggregated of six or seven lesser follicles, though with the common glass they seem single.

No. 43, 44, 45. Portions of a diseased Colon from a Publican in Piccadilly.—44 and 45 came away in a Dysentery of which he recovered.—43. is the Colon two years afterwards when he died.—44 and 45 seem to be portions of the internal coat ulcerated off.—43 does not explain this separation, but appears ragged and ulcerated, with stricture at one place.

No. 46, 47. Two portions of Colon from a Dysenteric Patient. The surface seems covered with a preternatural growth and enlargement of rugæ, rather than ulceration; as the colour is different, however, in different places, it is probable that the whitest is new granulations, and the yellow the old surface not yet destroyed by ulceration.

Liver and Gall Bladder.—No. 1. The Liver and Gall Bladder of a Child at birth, peritoneal coat removed, very red.

No. 3. A portion of the Liver from an Adult, the peritoneal coat, and its own proper coat are turned down at one place, and floating in the spirits.

No. 29. The Gall Bladder, Ductus Cysticus, Ductus Hepaticus, and Ductus Communis Choledochus, with the beginning of the duodenum all slit open, to shew the internal surface of the former, which is honey-combed and fasciculated; a bit of black stick is introduced into the opening of the gall duct.

No. 33. A portion of the Liver of a Child at birth, with the Gall Duct and beginning of the Duodenum injected red, to shew that there was no gall bladder.

No. 47. g. A portion of a Gall Bladder, where the Gall Stones ulcerated their way through the bladder, and the bile was poured out into the abdomen.

No. 47. h. A Gall Bladder ulcerated at the posterior part, by which the bile was effused into the neighbouring part of the abdomen; ductus cysticus is entirely obliterated, and choledochus of a smaller size than usual.

No. 49. A Gall Stone about the size of a common hen's egg, filling almost the whole cavity of the gall bladder, one half of which is removed to shew this, the ductus cysticus is kept open by a quill.

No. 49. a. A Gall Stone, the size of a hazel nut, seen in the ductus communis choledochus, about half an inch from its opening into the duodenum; ductus hepaticus, and cysticus, as well as choledochus, are very much distended.

No. 50.—1,054 Gall Stones of different sizes, forming thirteen rows, each about ten inches long, spread on white paper, the smallest form three circular planes at the bottom. they are gummed to the paper, and were taken from a patient who died of flooding, and had no jaundice.

EAST SIDE, RIGHT HAND.

Very elegant views of Thorax and Abdomen. The preparations of Heart and Lungs, contained in this division, are perhaps the finest in the world, they are exceedingly beautiful, and have been dissected with the greatest care and labour.

Thorax and Abdomen.—No. 1. A Male Child at birth, (still-born,) injected from the umbilical cord; the anterior parietes of thorax and abdomen

Hall of Anatomy.

Presses. East Side. Right Hand.

are removed, to shew the viscera of both cavities in their situation.

No. 2. A Female Child at birth, (still-born) the posterior parietes of thorax and abdomen are removed to give a back view of the contents of both cavities.

No. 10. The contents of the Thorax and Abdomen from a fœtus at three months, intended principally to shew that the auricles are larger, in proportion to the ventricles, than in the adult, and that the right and left touch one another before, and quite surround the upper anterior parts of both ventricles. The lungs also are at a greater distance before, and leave the heart quite exposed, particularly on the right. The thymus gland is now smaller in proportion to the heart.

HEART.—No 13. The Heart of a Boy about 12 years old, filled with size, hardened in spirits, and then cut open; the size removed to shew the internal structure of auricles and ventricles, with the exit of the great vessels.

No. 23. The Heart of a Cod, consisting of one auricle and a ventricle, shewing single heart; it was hardened in spirit of wine, and then opened.—The veins coming into the auricle have a valve, the ventricle has a pair, and the gill artery has a pair; is also fasciculated internally like the muscular ventricles of other hearts.

No. 24. The Heart of the Turtle, treated in the style of No. 13, shewing two auricles, and a kind of single ventricle, two aortæ behind the pulmonary artery arise from this ventricle; quills are introduced into the pulmonary veins.

No. 24. a. The Heart of the Torpedo; the arteries and veins filled partly with red and yellow injection, and partly with quicksilver.

No. 25. The right Auricle of the Heart of an Adult, treated as No. 13, the cava inferior from its exit from that auricle to about four inches down slit open, to shew valvula nobilis or Eustachii, also the fasciculated structure of the inner surface of the auricle.

No. 27. Do. from a Child, shewing the same, having the appearance of Brussels lace as delineated by Eustachius.

No. 28. The Heart of a Child filled with size coloured with vermilion; the right auricle is removed to shew the foramen ovale covered with a thin membrane, loose only at the upper edge, and so placed that the blood of the right auricle only can pass through it, that of the left shutting it close.

No. 32. The Septum Auriculorum from an Adult, shewing foramen ovale open, and a goose quill in the passage.

No. 54. The Heart of a Young Man who died about twelve years of age; the pulmonary artery is exceedingly small, as is the right ventricle of the heart; the ductus arteriosus and foramen ovale are both open; the branches of the artery which go into the lungs are barely large enough to keep up a circulation there.

No. 56. A portion of the left ventricle of the heart with the aorta slit open, to shew one of the semilunar valves ruptured.

No 64. Ossification of the semilunar valves of the aorta, very generally.

No. 68. The Carpenter's Heart, who, in dove-tailing a piece of wood, ran the chizel through septum auriculorum.

LUNGS.—No. 9. The left lobe of the Lungs from a Child at birth, highly injected red; the pleura turned down to shew the investing membrane of the lungs.

No. 10. The Lungs of a Pigeon, where there is no pleura, or where it exists it is perforated by an infinite number of holes, so that such lungs cannot be distended without inflating the cavity of the chest and abdomen, also the bristles shew that the principal branches of the trachea are open towards the abdomen.

No. 12. The Os Hyoides, Larynx, and Trachea, for some way through the Lungs; a beautiful preparation; the branches of the bronchial artery are seen on the lower part; before, the trachea is principally cartilaginous; behind, membranous.

Hall of Anatomy.

No. 14. The Larynx from an Adult, with the Os Hyoides; in a front view is seen the epiglottis above the os hyoides, then the thyroid cartilage, and lowest the narrow part of the cricoid; behind the principal objects are the arytænoid cartilages standing on the basis of the cricoid.

Presses. East Side. Right Hand.

No. 26. A section of the Trachea of a Horse, the cartilaginous rings go quite round and lap over, but are loosely connected by cellular membrane; the inner surface has a pretty thick mucous membrane (turned down) and a muscular coat, whose fibres are principally longitudinal.

No. 29. The Trachea of the Turtle at its bifurcation; the cartilages go quite round, and form one complete ellipse, and are moveable on one another, and united by a ligamentous, or rather an elastic condensed cellular membrane.

No. 31. The Trachea with its branches in the Calf, after the surrounding parenchyma had been destroyed by maceration in water; what is now visible is not materially different from the ramification of an artery or vein.

No. 34. c. A portion of the Trachea near the surface of the Lungs of the slink Calf, after maceration; the branches of the bronchial artery curling along those of the trachea are extremely beautiful.

No. 35. The Lungs of a Frog injected red, and after injection and drying cut open; each lung is a bladder, which on the inside, is formed into cells like a honey-comb; it gives the most simple idea of lung; the substance of the lungs is almost as thin as a spider's web.

No. 36. One half of the Lung of the Turtle, after the pulmonary artery had been injected red, and to great minuteness. In this preparation the trachea with its branches are divided longitudinally, and the whole seem to be a cellular network or sponge; on the posterior side some absorbents are filled with mercury, but do not appear, unless held between you and the light, owing to the thickness and opacity of the pleuræ.

No. 42. A portion of Human Lungs, the air cells filled with mercury to shew their size; on the surface of the lungs, they are much smaller than the head of the finest pin.

No. 70. The Trachea of a Child who died of the Croup; the posterior half is turned down, to shew the coagulable lymph plugging up the trachea entirely.

No. 76. A portion of Lungs from a consumptive patient; the branches of the trachea in many places removed by ulceration, the matter had found its way into the cavity of the chest, forming empyema; the lungs are connected to the ribs by a thickened membrane, originally lymph, now carrying red vessels.

No. 79. A portion of Lung, with a vast number of tubercles, injected red, and some lymphatics on the outside.

No. 86. A portion of Lungs consolidated into a mass like the liver, where, of course, the air cells are nearly obliterated.

SOUTH END OF HALL.

Presses. South End.

In this division are contained a splendid collection of preparations on the structure of the skin, nails and hair. Views of mouth, nose, and glands, diseased bones, ear, eye and teeth.

SKIN, NAILS and HAIRS.—No. 1. A Child's Head injected red, cuticle not removed, glass eyes remarkably beautiful, it looks as if it were alive; about three or four years of age; the skin of the face most natural.

No. 1. a. The left Fore Arm and Head of a Girl, about twelve years of age; the cuticle seems removed in many places, so as to shew the pores of the cutis.

No. 4. The Scalp of a Child, exceedingly red from injection of its arteries and veins; nothing can be mor beautiful than the view of the vessels seen between the light and the eye; shews the vascularity of the skin.

Hall of Anatomy

Presses. South End.

No. 5. A Human Face, the arteries injected to most astonishing minuteness; the cuticle is removed; the arteries project, and form villi on the lips and nose; the inside of the mouth and nose are exceedingly vascular.

No. 7. The left hand minutely injected red, stripped of its cuticle: the whole exceedingly red and beautiful, from the magnifying power of the round bottle and spirits.

No. 8. A Horse's Foot minutely injected red, and deprived of its hoof; round the upper edge. the blood vessels project and form waving villi, longer even than on the surface of the dog's intestine.

No. 9. A portion of Cutis from the Heel injected red, in which corresponding villous ridges and grooves are seen corresponding to those in the cuticle.

No. 11. The Nipple and Areola from a Man's Breast, shews the tuberculated sebaceous glands all round the nipple; the hairs longer at this place.

No. 12. A portion of Cutis, with its subjacent membrana Adiposa from the human axilla; at one part the membrana adiposa is dissected off, to shew odoriferous or sebaceous glands lying immediately under the skin, as large as hemp seed.

No. 15. A portion of Skin from a Black, the cuticle and rete mucosum both turned down; cuticle is transparent and rather white; rete mucosum very thick, rather dark brown than black; the skin under it very white.

No 16. A portion of Skin from a Black, cuticle only turned down; that surface contrasted with the one whose cuticle is on looks very black, so that the cuticle is rather in itself white.

No 19. The Upper Lip from a Black; rete mucosum lost a little way within the mouth.

No. 25. A portion of Cutis, with a large cicatrix from a Negro; the new formed skin appears different from the original; the regenerated cuticle seems thinner, and no new rete mucosum is formed.

No. 28. The Cuticle of a Child's Hand removed entirely by maceration, forming what anatomists call chirotheca; it was pulled off as a glove from the hand, and is very white; the nails adhere to it as if they were continued from the cuticle.

No. 31. b. A portion of Cuticle from the upper side of the Foot, with the nails of two toes; this shews very well the short processes which go into the smaller pores, different from those which go with the hairs, or the finer filaments of Dr. Hunter.

No. 35. The Cuticle of the Great Toe strongly adhering to the nail, as if continuation of the other; the root of the nail runs under cuticle loose for near a quarter of an inch, but nearer the top becomes firmly attached.

No. 36. A portion of Scalp injected red, the hair still on; in a side view, it is evident the bulbs or roots of the hair lye deeper than the cutis in the adipose membrane.

No. 40. A portion of Cutis injected red, covered with small pox.

No 47. A portion of Elephant's Cutis tanned, above an inch thick, the cuticle turned down; it here appears that the cuticle forms vaginæ which pass down a great way into the pores of the skin.

No. 50. A portion of Skin covered with small pox, injected red; the cuticle and rete mucosum turned down and adhering to one another; a new membrane is also turned down, in which the greater part of the pustules seem to reside.

No. 52. c. A portion of Skin from the arm injected; the cuticle and rete mucosum removed, a new vascular membrane turned down and loosely floating, less perfect, however, than the small pox membrane

Mouth and Nose.—No. 2. That part of the Head from a fresh injected subject which shews the right side of the cavity of the Nose, and upper part of the Mouth in one view, and the antrum of Highmore opened.

No. 5. The same preparation as No. 2. from a younger subject, most beautifully injected red; there is a bristle in ductus ad nasum, its lower end comes out beneath turbinatum inferius; another bristle in one of the cells of the æth-

moid comes out above os turbinatum superius; a third bristle is in the mouth of the Eustachian tube.

No. 6. The opposite side of the same Face, shewing an exceedingly beautiful injected septum narium; Schneider's membrane appears honey-combed, like the inner surface of a child's stomach, particularly towards the anterior part; there is a bristle in the Eustachian tube, in the ductus ad nasum, and the antrum is opened externally.

No. 7. a. A perpendicular section through Crista Galli; septum narium, and ossa maxillaria superiora, so as to look on the anterior half of the nose. The ossa turbinata are seen hanging down, and the thickness of the cartilaginous and bony septum, as well as of the membrane covering them; the nose is entire on the opposite side.

No. 8. The posterior part of the same Nose and Roof of the Mouth; the same things are seen as in the last; the cavities of the antra are also seen with bristles in their orifices; a considerable portion of the orbit is also seen; on the back part come in view foramina optica, lacera, rotunda, and the posterior nostrils.

No. 19. The Nose, Mouth, and Cheeks of a young Child, beyond description elegantly injected red; the cuticle is removed by maceration, the arteries project remarkably on the nose and border of the nostrils, as also on the upper and under lips, forming villi as in the intestinal tube of the dog; a couple of bristles are seen on the inside of the mouth, passing through the orifices of the ducts of the parotid glands.

No. 21. The roof of the Mouth, Teeth, and Alveolar Processes from an Adult, injected red; the gums are exceedingly beautiful, the teeth well shaped, and the hard palate is distinguished from the soft, by the first being of a pale colour, and the last very red, on each side of the uvula are seen the tonsils, making a cluster of follicles.

No. 23. The Human Adult Tongue, with the Epiglottis, and the Os Hyoides; shews the upper surface of the tongue follicular behind, and villous for about three parts before; some of the villi are long, projecting beyond the rest, others lower down shewing round heads like pin heads, others like heads of tacks.

No. 29. The Tongue of a Child, one carotid only has been injected red; the injection stopped in the middle line of the tongue without passing to the other side; the one half of the tongue looks red, the other white; the upper part of the larynx is also seen.

No. 55. A section through the Forehead cavity of the Nose and Roof of the Mouth; it shews polypus excrescences every where in the cavity of the nose, destroying the bones even of the orbit and the eye itself, and forming a tumour externally on the cheek.

No. 55. a. The right side of the Face; cavity of the nose seen on one side, antrum of Highmore laid open on the other; two polypi are seen hanging in the cavity of the nose under os turbinatum superius, and covering the passage into the antrum; the membrane of the antrum is thickened into a similar substance, as if the disposition to form polypus had spread over the whole surface.

Glands.—No. 12. a. A Parotid Gland beautifully injected with quicksilver; the external ear still adheres, and the gland with its ducts are in situ.

No. 14. a. A Maxillary Gland injected with Mercury, and the duct preserved through its whole length. The minute follicular structure is also seen.

No. 15. The Maxillary and Sublingual Glands, with bristles in their ducts adhering to one half of the tongue. The tongue is slit from the root to the apex, it is the left half, with the left maxillary and sublingual glands which are seen. The duct of the maxillary is about three inches long, opens near the tip of the tongue on its under surface, the ducts of the sublingual seen, eight in number; these open on the under surface of the tongue near its outer edge.

No. 52. Larynx with the Thyroid Gland, which lies on its fore part just

Hall of Anatomy. Presses. South End.

below the thyroid cartilage, in form of a crescent; a process runs up from the middle towards the pomum adami; from one extremity to the other, following its curve, will be about four inches; it is about one inch broad, and is follicular.

No. 52. 3. The largest Bronchocele perhaps ever seen, from a Patient who died at St. George's Hospital. On one side it resembles an enlarged kidney of the hydatid kind, but when cut into, the tumour seems in many places of the pulpy scrofulous kind. The lymphatic glands in the neighbourhood seem to be affected with the same disease. Œsophagus is seen slit open on the back part of the tumour; the trachea and larynx are nearly surrounded by the tumour.

No. 54. A dilatation of the substance of Thyroid Gland on the right side into a large pouch capable of containing two ounces of fluid; it was an abscess which burst into the trachea, and killed the patient.

Diseased Bones.—No. 1. A section longitudinally through the whole length of Os Humeri of a man who died with remarkable softness of bones; the cavity of the bone is much enlarged and was full of oil mixed with blood, no apppearance of cancelli, but cross bridges or septa here and there; the two extremities are less altered than the other parts, the cortical part thin as paper, and almost as soft as bees wax.

No. 13. A Fracture in the middle of the Thigh Bone; it never united, but a new joint with capsular ligament was formed, and he walked as if with three joints in the thigh bone; the ends of the fracture are covered with thin cartilage.

No. 22. Appearance in White Swelling; the cartilages on the ends of the femur, tibia, and inner surface of patella, all gone.

No. 25. A longitudinal section through the joint of the knee, to shew incipient anchylosis, from white swelling.

No. 25. a. The Cartilage which covered one condyle of the Femur, with the appearance of cicatrix in the middle; two loose smooth cartilaginous and bony bodies are hung to it by the same thread, these lay loose in the cavity of the joint, but had been originally attached to middle portion of cartilage.

No 34. The Vertebræ of the Back with the heads of the Ribs from a scrofulous Child; the bodies of almost all the vertebræ are bare and eroded before, the intervertebral cartilages in many places destroyed, almost the whole of the bodies of the vertebræ gone, the spinal marrow appearing bare behind, and the cartilages of almost all the ribs eroded.

No. 43. The Ankle Joint covered with a stratum of chalk; in many places the cartilage may be seen shining through.

No. 54. The lower portion of Femur increased to three times its natural size by an adventitious mass of ossific granulations shooting in a sort of radiated direction from the body of the bone.

Ear.—No. 1. The left Os Temporis with the external Ear and Eustachian Tube; the squamous portion and upper part of os petrosum are removed to give a view of the tympanum, vestibulum, and chochlea; the meatus auditorius externus is laid open from before, and is seen through its whole length, membrana tympani with the ossiculæ are also in situ, and the Eustachian tube is uncovered through its whole course. This preparation serves to give a general idea of the whole organ of hearing.

No. 7. A section of the Organ of Hearing from without, inwards and forwards; it particularly shews the extent and dimensions of meatus externus, which, on the whole, is incurvated something like the italic *S*, the internal end goes more downwards as well as forwards.

No. 8. The other half Ditto; on the inner surface of the meatus are seen pores in great number, generally believed to be the excretory ducts of the glandulæ ceruminæ.

No. 12. A transverse or horizontal section of the Adult Human Ear, the one half down, the other up, but will be best understood by laying the

bottle on its side; the mastoid cells, tympanum, vestibulum, and cochlea, are pointed out by bristles. Hall of Anatomy.

No. 13. The Organ of Hearing from a Fœtus; meatus externus cut open to shew a mucilaginous white web covering the membrana tympani. Presses.

No. 14. Shews the same membrane to be exceedingly vascular, concave externally, and convex internally, the ossiculæ are seen behind South End.

No. 15. Membrana Tympani divided into two layers, both beautifully injected red.

No. 16. B. A section of the Temporal Bone in which the different cavities are exposed; shews the membrana tympani in situ, perforated, and a bristle in the perforation.

No. 17. The Organ of Hearing from a Child at Birth; vestibulum, cochlea, and semicircular canals are opened, membrana tympani is broke down, it shews chiefly the ossiculæ auditus in situ, and the musculus externus mallei.

No. 19. Os Temporis from a Fœtus, minutely injected red; the membrane which lines the cavity of tympanum is reflected over the ossiculæ, so as to form a kind of periosteum, and so vascular that the little bones look like bits of vermilion.

No. 20. Os Temporis from a Child at Birth; membrana tympani is removed, and the muscles of the malleus and stapes are coloured with vermilion.

No. 21. The whole Organ of Hearing from an Adult, suspended nearly in situ; meatus externus, tympanum, vestibulum, cochlea and mastoid cells laid open. It shews principally the portio mollis of the auditory nerve dividing into three branches, two of which go towards the vestibulum, and one enters the basis of the cochlea.

Eye.—No. 2. The left Eye-Brow and Eye-Lids, to shew the quantity of hair.

No. 3. The right Eye-Lids, injected red; bristles in the puncta lachrymalia; their inner surface exceedingly vascular.

No. 5. The left Eye-Lids of a Child, injected red. The tunica conjunctiva or membrane which lines them over the cornea, is shewn as one entire bag, by inverting the eye-lids and removing the eye-ball; the part lining the eye-lids is villous, and exceedingly vascular, that covering the eye-ball is transparent.

No. 9. A couple of Eye-Lids, injected red; the principal object is the orifices of the glands of the tarsus on the inner edge of each eye-lid; they range in one line regularly, and at equal distances; in the under eye-lids the secretion of the glands is seen coagulated by the spirit, and hanging from the orifices like minute globules of glass.

No. 10. The left Eye-Ball with the Eye-Lids. The lachrymal gland is seen dissected above the outer angle of the eye, four bristles are introduced into the ducts of this gland in the under side of the upper eye-lid near the angle.

No. 13. a. The Eye-Lids with the lachrymal gland of the Goose, beautifully injected with quicksilver; the duct will easily admit a crow quill, and the cells of the gland are distinctly follicular.

No. 13. b. The Eye-Lids with Lachrymal Gland of the Turtle, injected with quicksilver; a conglomerated follicular gland; it has but one duct, which will nearly admit a goose quill, and is larger in proportion than in any other animal.

No. 18. A section through the Optic Nerve and Ball of the Eye; the choroid coat injected with coarse injection, the artery of the crystalline also hanging down, intended to shew the shape of the eye-ball, humours and retina being removed.

No 19. Tunica Sclerotica divided all round on the middle of the Eye-Ball, one half turned up, the other down, to shew the vessels of the choroid coat,

Hall of Anatomy

injected red; they are principally vorticose, the humours escaped by a rent on one side

Presses. South End.

No. 22. A similar Preparation; the sclerotic is in part removed, to shew these vessels on the choroid from without; the humours, except the aqueous, are in situ. The ocular artery with its branches, and the nerves of the lenticular ganglion are also seen.

No. 23. a. One half of the Sclerotic Coat, in an Eye-Ball otherwise entire, to shew the choroid in its uninjected state continued into iris. The choroid appears of a dark brown, from the pigmentum nigrum beneath; the iris of a blue and white intermixed, the vessels of the choroid are evidently continued into the iris.

No. 25. Nearly the whole of the Sclerotic and Choroid Coats inverted; the inside of choroid coat beautifully injected red, forming an elegant network, which every here and there form penicilli.

No. 27 A section through the Optic Nerve and Globe of the Eye; both halves injected by the veins which are blue; the arteries are injected red; a very elegant preparation; the ciliary processes look alternately blue and red, the veins as in other parts, are more numerous, and are even seen branching in the substance of optic nerve, and on the retina itself; many of those on the retina, are going to the chrystaline capsule

No. 28. Eye-Ball, with the Sclerotic Coat partly removed, that the Veins of the Choroid might be seen; they are injected white, forming the vasa vorticosa; the arteries are injected red; a very fine preparation.

No. 28. a. The Human Eye dissected; one half turned up, the other turned down, and inverted; the humours and retina are removed, and choroid coat presents itself; the veins injected with yellow wax, large radiated and vorticose, coming from four or five different centres, corresponding to as many principal branches which lye on the outside of the sclerotica, but which on perforating it, ramify in this manner.

No. 36. The Iris with a portion of the Choroid Coat beautifully injected red, and spread on black paper; some remains of the arteries of membrana pupillaris are also seen continued from those of the iris.

No. 37. The Globe of the Eye with the Optic Nerve from a Child; cornea only is removed to look on the iris, very elegantly injected red; the arteries at first view seem portions of the radii of a circle, cut off at some distance from the centre equally all round; the middle space thus left is the pupil.

No. 49. The Eye of a Fœtus about seven months, injected red; the cornea is removed; a very elegant vascular membrane is seen shutting up the pupil; its arteries meet seemingly in a point in the centre, others crossing from one side to the other; it has been called the membrana pupillari, and is lost at birth

No. 49. d. The Eye of a Fœtal Calf minutely injected, and part of the vitreous humour removed, to shew the capsule of the crystalline injected behind, from an artery passing through the centre of the vitreous humour; its branches are radiated but convoluted, and the membrana pupillari is beautiful beyond description; the optic nerve is smaller in proportion to the size of the eye than in the human subject.

No. 62. A section through Optic Nerve and Eye-Ball; retina and a portion of vitreous humour remaining; the sclerotic and choroid coats with the pigmentum nigrum and retina are seen in a side view.

No. 73. The posterior part of the Human Eye-Ball inverted, Choroid minutely injected red, and hanging down; the texture of the retina is here evident, viz. an internal vascular web, transparent as a spider's, and an external pulpy opaque membrane, probably the medulla of the nerve; this external membrane broken in many places, shews each more distinctly.

No. 79. a. The Eye of the Whale cut open, one half turned up the other will; sclerotic is nearly an inch in thickness, and seems composed of white

elastic fibres running in every direction; the retina hangs from the bottom a different colour from the rest, and is perforated for the passage of blood vessels and nerves. Hall of Anatomy.

No. 76. b. 79. c. Two of the finest preparations of retina ever seen; the humours of the eye are suspended by them, and the choroid and sclerotic are turned up; the retina has beautifully radiated vessels, and appears as transparent as a spider's web. Presses. South End.

TEETH.—No. 4. The eight Teeth of one side from the upper jaw, shewing the size of the teeth, the body, neck, and root—(stuck on green paper.)

No. 5. Twelve Teeth from a Pig fed on Madder, become red throughout; shewing that arteries form the teeth as they do other bones; the madder is taken out of other bones, but always remains in the teeth, as if they had no absorbents—(on blue paper.)

No. 6. Eleven Teeth, some of them young, others adult, broken with a chisel and hammer, to shew the enamel perpendicular to the wearing sides, it appears to be of two kinds, a more opaque, and a more transparent—(on blue paper.)

No. 7. Eight Teeth worn down on the grinding-stone almost to the middle of the body, shews the difference between bone and enamel, also the thickness of the enamel—(on blue paper.)

No. 13. One half of the lower Jaw; shews a perpendicular section of the teeth in situ from the outside; the bone burnt black, and the enamel white, which becomes gradually thinner as it comes nearer the neck of the tooth—(on green paper.)

No. 14. Six Incisors from the second set; the enamel waved in the horizontal direction—(blue paper.)

No. 16. A transverse section of a Horse's Tooth, which had been shed; the bony substance burnt with a red hot iron till it became black; the enamel is seen white, not on the outside as in man, but irregularly convoluted and intermixed with bony substance—(blue paper.)

No. 18. Nine Teeth shewing a transverse section of their cavities; they are fixed in holes in stiff blue paper, some of these are nearly round, others elliptical, others oval, and some square.

No. 20. An upper Jaw, the teeth in situ, and ground down so as to give a perpendicular view of the cavities from the outside; the cavity upon the whole is larger nearest the basis of the tooth, or about the middle of the body, and gradually becomes smaller as it goes to the extremity of the fang; takes the shape not only of the body but roots of the tooth; is therefore single, double, treble, or quadruple, in different teeth.

No. 27. The whole lower Jaw of a young person with the teeth in situ, highly injected red; steeped in an acid, and divided perpendicularly through the teeth and dried; shews many of the teeth exceedingly vascular, particularly those which had not yet got above the gums.

No. 20. An Adult Cuspidatus split open, the cavity highly and most elegantly vascular, more so than usual.

No. 31. An Incisor of the lower Jaw treated in the same way; also very vascular, the striæ of the enamel most distinctly seen.

No. 37. The four Incisors of the upper Jaw in one row, and the four of the under in another; those in the upper are larger than those in the under, particularly the two middle ones; they have but one root and a sharp cutting edge.

No. 38. The four Cuspidati in one row; the two first belong to the upper jaw, the two towards the right hand to the under; their bases are pointed like a wedge; they have but one root, are largest in the upper jaw.

No. 39. Eight Bicuspides in two rows; the first row belongs to the upper jaw, the second to the under, their bases have each two points, they have here but one root they are also largest in the upper jaw.

Hall of Anatomy.

No. 40. Six Molares; the three uppermost belong to the upper jaw, the other three to the under; they have generally three fangs.

No. 43. Four Dentes Sapientiæ, with each four fangs.

Presses. South End.

No. 45. a. Twelve Teeth in four rows, every root having a sort of nodus or exostosis, by which its extremity is the largest part, which would make the extraction of such teeth difficult and dangerous.

No 50. Upper and under Jaw of a Child two years old, injected; teeth in situ, and the jaws so dissected as to shew the arteries ramifying in the pulp of the teeth.

No. 51. A. Child's under Jaw Teeth in situ minutely injected at seven months; the capsule as well as the pulp of the teeth highly vascular, one to form enamel, the other bone.

No. 54. The under Jaw of a slink Calf injected, and so prepared as to shew the different pulps, two rows adhering to the under sides of the alveolar processes; and one middle row descending between the two first.

No. 80. The head of the Viper, with two bifid teeth, containing canals for the passage of the poison.

WEST SIDE OF THE HALL.—Left Hand as retiring.

Presses. West Side. Left Hand.

This Division contains Preparations (all of them very fine) on the following subjects, viz. Brain with its Membranes—Spinal Marrow and Nerves.

A beautiful and splendid series of Preparations, shewing the structure and growth of Bone, of Periosteum, Cartilage, and Ligament.

Preparations illustrative of the Absorbent System. They are, without doubt, the most magnificent in the world, and were prepared by the joint and arduous labours of the celebrated Hewson, Cruikshanks and Hunter.

Brain.—No. 1. The Dura Mater injected red, taking the shape of the brain it had covered, having been filled with melted wax.

No. 3. The superior part of the Brain of a Child injected red, to shew that it is divided into two lateral hemispheres and convoluted.

No. 4. The under half of the same Brain of a Child, to shew that the hemispheres below are divided into anterior, middle, and posterior lobes; it shews also the cerebellum.

No. 5. The Pia Mater injected red; the injection has returned by the veins colourless; the processes on its under surface, which pass between the convolutions of the brain are seen exceedingly vascular.

No. 6. Ditto, the arteries only injected red, and the processes exceedingly distinct; these have been named tomentum cerebri.

No. 7. Ditto, with the veins white, from the colourless fluid returning; injection excedingly minute and beautiful.

No. 9. The Medulla Oblongata from an Adult, turned upside down, to shew the loose floating tunica arachnoides; it is suspended by two threads fixed to the two vertebral arteries, which were cut through close to the inside of the dura mater.

No. 12. The superior Longitudinal Sinus laid open, to shew the bridles or fræna which pass from side to side, to prevent its distension.

No. 12. b. A portion of Dura Mater; the longitudinal sinus laid open; shews round bodies in clusters, the supposed glands of Pacchionus; and two bristles placed in the veins shew that they open into the sinus against the current of the blood.

No. 13. a. The basis of the Skull of a Child injected red; the lateral parts removed to shew the exit of the nine pair of cerebral nerves, the olfactory in particular are very distinct, very vascular, and ramify upon the æthmoid cribriform lamellæ, they are all pointed out by black bristles.

No. 14. The Plexus Choroides taken from the bottom of the lateral ven-

tricles injected red, and hanging by two branches of the vena magna Galeni. Hall of Anatomy.

No. 14. a. One hemisphere of the Adult Human Brain, in which the lateral ventricle is seen rather larger than usual, but as the cranium was of the usual size, and the substance of the brain sound, it is rather an instance of large ventricle than of hydrocephalus; the pia mater is seen lining the cavity, the blood vessels upon it appear large, and are filled with their own blood. Presses. West Side. Left Hand.

No. 16. A section of Cerebellum, it hangs by one of the peduncles or crura cerebelli; it shews the convolutions of the cerebellum smaller and more parallel than those of the cerebrum; the internal whiter substance forming arbor vitæ is seen branching between the convolutions of a darker ash-coloured cortical substance.

No. 20. The Crura of the Cerebrum and Cerebellum, with a portion of Medulla Oblongata; third and fourth ventricles are laid open, a bristle passes through iter a tertio ad quartum ventriculum, another passes under the comissura posterior into the third ventricle; a third bristle passes across the upper part of the fourth ventricle.

No. 20. a. Tuberculum Annulare, Corpora Albicantia, Pyramidalia and Olivaria, third and fourth ventricles; some nerves (origins of the 7th pair) are seen naked in the bottom of the fourth ventricle, with bristles under them.

No. 25. The Dura Mater from a Patient who had been long affected with Saint Vitus's Dance; a very strong thick membrane formed between the dura mater and the brain is turned down; this covered only one hemisphere of the brain, and must have owed its existence to great inflammation.

No. 33. A perpendicular section of the Head injected red; the section is through the brain by the side of the falciform process, shews one side of the left hemisphere of the brain, lateral ventricle, nervi optici, arbor vitae, one side of medulla oblongata, and a portion of medulla spinalis; the inner cavity of the nose, cavity of the mouth, and one half of the tongue, with a small part of trachea and œsophagus.

No. 38. A portion of Brain and the whole of Medulla Spinalis, the dura mater is removed from the latter to shew its size at different places, also to shew the arteriæ spinales injected red, with the origins and ganglions of the spinal nerves; this was previously hardened in a solution of alum and water, which, however, has diminished its whiteness, as well as the redness of the arteries.

Periosteum.—No. 1. The half of the Tibia sawn longitudinally, the periosteum is turned off on one side from top to bottom, and is seen covering epiphyses, as well as the body of the bone; it is a white shining pretty thick membrane.

No. 2. The Fibres of the Ligament between the ends of the ribs and sternum, diffusing themselves over the sternum, and forming periosteum.

No. 3. The Periosteum investing the Radius and Ulna, continued to form interosseous ligament.

No. 4. The Thigh Bone injected; the periosteum removed in several places, in others turned down; it seems every where nearly of the same thickness, except at the ends of the bone where it is thickest.

No. 7. Another Thigh Bone, injected red, exceedingly vascular; periosteum appears to be made up of different layers.

No. 11. A Frontal Bone, shewing pericranium made up of different strata.

Cartilage.—No. 1. The inner surface of Patella; its cartilaginous covering by long maceration in water has its fibres unravelled; some of them are dug out to shew that the fibres of cartilage are perpendicular to the surface of the bone they cover.

No. 3. The lower end of the Femur, Patella, and Semilunar Cartilages, with the portion of fat, supposed a synovial gland; every thing except the car-

Hall of Anatomy.

tilaginous covering, is of a bright red, from the injection of the arteries with vermilion.

Presses. West Side. Left Hand.

No. 9. The first Ribs from an Adult; the periosteum turned off from the bony portion appears to be continued into perichondrium, also turned off for some way from the cartilaginous extremity.

No. 12. A Patella with the Tendons of the Vasti, &c.; shews the perichondrium on its inner surface near the edges to be exceedingly vascular; arteries injected.

No. 13. The Tendon of the Vasti inserted into the Patella, and continued on to the head of the Tibia, injected red; on the inside of the tendon, before it reaches the patella, is seen a sacculus mucosus which communicates with the joint, and is one inch and half in diameter.

No. 15. The lower end of Tibia and Fibula, forming the joint of the foot, injected red; the cartilage is of the most beautiful white, whilst the surrounding parts are exceedingly red and vascular.

No. 16. The Acetabulum from the Pelvis of the Sea Cow; synovial gland loose and floating in its cavity, and putting on a more glandular appearance than in any other animal.

No. 18. The Interarticular Cartilage from the joint of the lower jaw of the Elephant, concave on both sides; its fibres are more of the ligamentous kind than other cartilages.

LIGAMENT.—No. 1. A Lumbar Vertebra with two of the intervertebral substances, shewing that it is externally made up of the same white kind of silver-coloured fibres as tendon; these decussate in many places, internally it approaches more to the nature of soft cartilage, and in the very centre is little firmer than the pulp of fruit.

No. 3. The Spine of a Young Child, shewing that the intervertebral substance is thinnest in the neck, and becomes gradually thicker to the upper end of the sacrum; shews also the external decussating ligamentous fibres of these substances the whole way.

No. 4. A perpendicular section of the superior ends of the Ossa Pubis, so as to look upon the Symphysis; this joint consists of two cartilaginous surfaces, and transverse ligamentous fibres passing from the one to the other; about the middle there is sometimes a discontinuation of these transverse fibres, and a kind of cartilaginous pulp only as between the vertebræ, and sometimes a cavity with synovia.

No. 8. The Joint between the Temporal Bone and condyle of the Lower Jaw laid open, shewing the thickness and extent of the capsular ligament, with the interarticular cartilage.

No. 9. The Joint of the Shoulder laid open, shewing the thickness and extent of the capsular ligament.

No. 10. A perpendicular section through this Joint, from an Adult, shewing ditto; also the large sacculous mucosus under the deltoid muscles.

No. 11. The Joint between the head of the Thigh Bone and the side of the Pelvis, shewing the thickness of the capsular ligament, and the extent of the round ligament in a young person.

No. 11. b. The joint of the Knee from an Adult, laid open in the bent state, shews crucial ligaments and semilunar cartilages with the sacculus mucosus under the ligament of the patella; a most beautiful preparation.

No. 15. The Paw of a Lion, prepared to shew the elastic ligaments, which occasionally stretch the claws, but which are easily overcome by the flexor muscles.

No. 15. a. Eight Vertebræ of the Neck from the Ostrich, shewing a very strong pyramidal elastic ligament passing through a canal in the spinal processes, and serving to support and regulate the motions of the head.

BONES.—No. 1. Parietal Bone of a Fœtus, long exposed to the weather; shewing that it is made up principally of radiated fibres, whose inner ends

meet in the centre of the bone, are close together, whilst the more external separate, and are at some distance from each other.

No. 3. A section of the middle of the Thigh Bone prepared as the former, shewing that cylindrical bones are nearly hollow within, having only a kind of network of small bony fibres, and that there is a strong compact outer covering.

No. 4. Head of the Tibia prepared as the former, shewing that the outer covering is exceedingly thin, that there is no internal cavity, but that the whole is nearly one spongy reticulated mass of long fibres, interwoven so as to give the appearance of cells.

No. 5. A Vertebra prepared in the same way, shewing the body to be composed of this spongy substance.

No. 9. A Rib which had been steeped in acid, is partly slit through the middle longitudinally, and has a knot tied on it at the lower end, having lost its earth.

No. 10. The Sphenoid Bone injected red, and semitransparent, from its having been steeped in an acid.

No. 22. One half of the lower Jaw from a Pig which had been fed on madder, shewing that the teeth are tinged red, as well as the jaw bone.

No. 23. The Tibia of a Pig which had been fed with madder at three different times, the ends of the bone are reddest and pretty universally so; there are also two pretty thick layers in the middle of the outer compact substance, forming the middle of the bone.

No. 24. The Bones of a Bird fed with madder, they are of a beautiful red colour, particularly the sternum.

No. 25. The Thigh Bone of an Ostrich slit up longitudinally, but so as to shew two openings near the head of the bone which communicate with the air cells of the abdomen, and by which air gets in and out from the cavity of the bone, which has no marrow, nor cancelli in the middle, and large cells at each end.

OSTEOGENY.—No. 1. The Patella of a Child about two years of age, still cartilaginous; the artery injected red, which would have converted it into bone is seen on the inner side, coming from the outside.

No. 5. The Patella from a Child about four years of age, the arteries injected red; the extremities of two small branches appear opaque, shewing ossification beginning, most of the other extremities are seen black, owing to the blood driven before the injection having dried, and not to any change preparatory to ossification having taken place.

No. 4. Ditto from a smaller Child, more extremities of arteries, shewing ossific matter, nearly in the centre of the patella.

No. 6. Ditto from a Child about four years old; a most beautiful preparation; the artery on the outside of the patella divides into two equal parts, is nearly the size of a crow quill, and opposite to the middle of the patella seems to send out from a centre ramifications to form patella; one of these branches appears as if ossified.

No. 9. A Patella with the lower end of Femur, from a Child about seven or eight years old; the branches of the arteries seem ossified, and look like coral, and there now appears in the centre of the patella a portion of bone about the size of a pea. There is also more osseous matter on the extremities of the arteries than on the branches, forming as it were little knobs.

No. 15. A most beautiful preparation; the branches of the arteries appear ossified for some way all round the central knob.

No. 24. The Tibia of a Child, in which the epiphysis at each end is half pulled off to give an idea of epiphysis.

No. 25. The Os Humeri of a Child about the time of birth, injected red; the ossification in the epiphysis of the head is about the size of a large pin's head, and appears like a red spot, vessels of considerable size, carrying the red injection, are seen passing through the cartilage towards the spot.

Hall of Anatomy. ——— West Side. Left Hand.

No. 27. The lower end of the Os Humeri; the small head is considerably advanced in ossification, the arteries going towards it and the pully, (which last is little more than begun) are seen ossified as in the patella; the internal condyle is likewise an epiphysis about the size of a small pea.

No. 33. Different slices of the Epyphysis of the lower end of the Thigh Bone; the ossified part rather larger than a pea, and tinged green, supposed by steeping in dissolved copper.

No 37. A longitudinal section of the lower end of the Femur from an Adult; the epiphysis is not yet united with the body of the bone.

No. 37. a. The upper end of Femur from a Young Person, injected; a section is made under the great trochanter nearly through the bone, by which its cellular structure may be discovered, a perpendicular section is made through the head of the bone, shewing the same structure in the epiphysis as in the bone. The great trochanter may be seen to be a distinct ossification, there appearing to be a circumscribed knob of bone covered by a transparent lamina of cartilage.

No. 51. a. The foot of a Child injected red and stripped of the cuticle; the great toe, its metacarpal bone, the cuneiforme internum, naviculare, astragulus, and os calcis are divided longitudinally; the two last are the principal objects, their ossifications being considerably advanced.

No. 53. The Spine, Ribs, and Sternum of a Fœtus between three and four months, divided into two equal parts, and on blue paper; every thing in the spine except the spinous processes seems ossified; the ossifications are at three different points in each vertebra, viz. in the body of the vertebra, and on each side of foramen medullæ spinalis.

No. 66. The two Ossa Innominata of a Child at birth, injected red, stripped of Periosteum; the acetabulum is almost wholly cartilage except at the lower end, where the ischium is ossified, about half an inch of the pubis is ossified, and nearly the whole of the ileum, the rest is cartilage, and is exceedingly beautiful.

No. 67. An Os Innominatum from a Child at birth, injected red, and sliced through the middle to shew the osseous fibres and vascularity of growing bone; both resemble rays passing from a centre to the circumference.

No. 68. Two Ossa Innominata more advanced, a considerable portion of the acetabulum is now bone, almost the whole of the ischium and pubis; the os sacrum completely ossified hangs from the top, the coccyx is yet cartilage.

No. 73. Os Temporis, bony circles, and Membrana Tympani, with Malleus and Incus, at three and a half months; the long leg of the incus and centre of the head of the malleus is bone, all the rest is cartilage.

Absorbent System.—No. 2. A portion of the small Intestine and Mesentery of the Antelope; in which the absorbents are preserved in the state they were found in the dead body; i. e full of their own chyle; the arteries and veins are both injected red.

No. 2. a. A portion of Human Intestine; an empty lacteal is seen running longitudinally on the gut, it is dintinguished by its greater whiteness from the surrounding parts; it is but seldom, however, they are so strongly marked.

No. 3. A portion of the small Intestine of an Ass slit open; after the arteries and veins had both been injected red, the preparation was suspended in water till the fixed air from putrefaction had passed from the cellular membrane into the absorbents; this air was afterwards forced out of these vessels by the quicksilver, which now occupies its place.

No. 8. A large portion of the upper surface of the Liver from the Adult; in most places the red colour of the liver is hid by the number of absorbents filled with mercury.

No. 9. A piece of Jejunum, the arteries and veins injected red; it is slit open, the whole, with the adjoining piece of mesentery, is not above four

inches square, yet in that space about ten absorbents are filled with mercury, and seen passing into the glands not far from the edge of the intestine.

No. 12. A longitudinal section from side to side of the Lungs of a Turtle; the arteries were injected red, the whole external surface is seen covered with a regular network of absorbents, injected with quicksilver.

No. 13. A very large portion of the Small Intestine and Mesentery of the Turtle; the arteries are injected red, the veins black, and the absorbents with mercury. The quicksilver seems to be every where extravasated, between the muscular and villous coats of the intestine.

No. 14. A portion of Do. from Do. prepared as above, but the intestine was dried without distending its natural cavity, so that what in the former over-distended intestine seemed extravasations, is here seen to be cylindric vessels and give an excellent idea of the absorbent system in this animal.

No. 21. A portion of the external surface of the Lungs; the absorbents form a most beautiful network, are injected with quicksilver, and from their appearance in some parts, it would seem that no point could be taken in that surface where there was not an absorbent.

No. 30. A portion of small Intestine from the Turtle; the arteries injected red, the veins black, and the absorbents with quicksilver. The quicksilver is seen on the internal surface of the intestines, in vessels just discernable to the naked eye; in the microscope they make a very large beautiful serpentine appearance; but nothing like orifice was evident.

No. 33. A portion of the Lungs of a Lioness who died in the Tower, and had hæmorrhage from the mouth and intestines; the absorbents were full of blood, which in the great trunks was coagulated, and prevented the mercury thrown in by the smaller branches from getting on; so that the orifices of the absorbents may be visible in the microscope, since they admitted particles of the blood which are so.

No. 34. A portion of the Thoracic Duct from a Horse, stretched on a glass cylinder, and inverted; by this means it was separated into two coats, an internal smooth floating one like that of arteries, and an internal fibrous one; the fibres run in all directions, but are principally circular.

No. 38. A considerable portion of the external surface of the Spleen in the Bullock; the absorbents running along that surface are injected with quicksilver, the mercury in many places endeavouring to go backwards, shews very distinctly the valves. It likewise shews a varicose appearance in these vessels, peculiar to them in particular parts of the body, especially in the spleen of most animals, except the human species.

No. 44. The Thoracic Duct in the Human Subject; its whole length injected with mercury, and laid upon green pasteboard. The valves are more remarkable after they pass the middle (going upwards) six or seven pair are discernable, though the valves in the human thoracic duct do not appear so large or well marked as in some other animals.

No. 45. The Jugular Veins and entrance of the Thoracic Duct slit open, and spread on blue paper, to shew a pair of valves at the beginning of the duct, with their loose edges turned forward, which prevents the blood in the veins from passing into the duct; the valves at the beginning of the jugular veins have their loose edges turned down, and their fixed ones upwards.

No. 48. a. The whole Mesentery of a Child at Birth; the arteries injected red, the veins black, intended to shew the absorbent glands scattered along its surface to the number of fifty or sixty, some of these smaller than the smallest pin's head, but very distinct; the largest are nearest the root of the mesentery, and form a portion of a circle like the pancreas Aselii in quadrupeds.

No. 52. Eight or nine of the Glands of the Absorbents in the Groin; they are injected with quicksilver to great minuteness. The absorbents of the surrounding cellular membrane are injected, and seen passing into the glands.

Hall of Anatomy.

In some of these last the mercury appears like a number of pin heads, shewing the existence and size of the cells of the glands; in others the vast numbers of smaller absorbents of the size of the finest human hair, covering the

West Side. Left Hand.

external surface of the gland, prevent us from seeing the cells which lye under them. The inguinal artery, though not injected, is seen running through the middle of this cluster of glands.

No. 59. The arch of the Aorta, with the Carotids and Subclavians; the trachea bifurcating to go to the lungs and jugular veins, slit open. The thoracic duct (which is one of the largest that has been seen) is injected with quicksilver, and the trunks of the absorbents of the lungs, and left side of the head are seen also injected with quicksilver, passing with it to the left subclavian. Other trunks, from the lungs, heart, and right side of the head, as well as right arm, are seen passing into the right subclavian and jugular; a very large trunk from the absorbents of the lungs passes behind the œsophagus, (which has a quill through it) to join thoracic duct a little below the root of the lungs; a very elegant preparation.

Miscell.

The preceding description of the Preparations in spirits is merely intended to point out a few preparations belonging to a certain number of the classes, but there are many others of great value and importance which cannot be enumerated.

Anatomical

Besides the Preparations exhibited on the Table, there are a great number of very valuable articles on many different subjects, contained in the Cabinets arranged beneath it. Amongst these are many skeletons, sets of bones, including a vast number diseased, shewing the effects of caries, exfoliation, rickets, mollities ossium, incurvation, hydrocephalus, exostosis, spina bifida, fractures and anchylosis of joints.

Many preparations shewing arteries, veins, and absorbent system, also aneurism. Many very fine casts of the viscera, gravid uterus, &c. with their moulds.

A very valuable collection of Calculi, the greatest perhaps in the world; (amounting to many thousands) containing nearly a thousand urinary calculi, with many salivary, pancreatic, biliary, intestinal, and bezoar calculi.

On each side of the entrance are placed two Glass Cases, one of which contains a small skeleton of a Tiger; the other the skeleton of a Goat. Over the Door on the North end of the Hall is placed a correct likeness of Dr. HUNTER, painted by Sir Joshua Reynolds. At the west end of the Hall, in a corresponding situation, is a fine painting by Bemmel of Dr. HERVEY, the first discoverer of the circulation of the blood. This painting was originally in the collection of Dr. MEAD.

From the Hall of Anatomy a flight of stone steps leads to the basement floor or Hall of the Elephant. On the top of the stair stands an Egyptian Mummy in the original coffin of sycamoor or cypress wood, carved to resemble probably the mummy within. The wood forming this case is not in the least decayed, although from moderate calculation, it must have been fabricated between two and three thousand years since. The body is enveloped in bandages of linen of different degrees of fineness many inches thick, which still retains its texture; between the layers or bandages a yellow gum appears to have been laid on for the preservation of it; the outward envelope is finely painted in hieroglyphics, among which appear the two Egyptian Gods, Isis and Osiris, the former with his Hawk's head. The gilding in some parts still retains its lustre. The case or coffin is hollowed out to the shape of the body, which is fastened to the under side of it by a strong cement or gum of several inches thick, of a brownish colour. The face is covered by several folds of linen, and the prominency of the nose and ear still remain; the eyes and mouth are painted; the ear is gilt; the whole is in the highest state of preservation, and not equalled by any in the kingdom.

In the window, under Bell Glasses, are also three small mummies of the white Ibis. This bird, though now unknown to the Egyptians, was formerly worshipped by that nation as a Divinity in consequence of the great service it did them in destroying the vast quantity of serpents and other noxious animals with which their country was infested. Their veneration for them continued even after their death, for whenever a body of a dead Ibis was found it was carefully embalmed, after the manner of their mummies, and buried in the catacombs with them; they are wrapped in folds of linen representing a small child, and painted with hieroglyphics. The mummy on the right, is preserved in the original coffin, as brought from the Egyptian catacombs of Saccarra. From this specimen the small bone described page 46 was taken.

HALL OF THE ELEPHANT.

In the centre of this Room stands a fine specimen of that stupendous animal the Elephant; on his left a young Calf Elephant finely preserved; on the right a Zebra; on the floor are various parts of the skeleton of this huge beast, as the head and tusks, leg and thigh bones, part of the ribs, teeth, &c. &c. The large Elephant and Zebra were the property of her present Majesty, who presented them to Dr. Hunter at their death.

On the right behind the Elephant is a complete skeleton of a Calf Elephant; and on the left a skeleton of a Buffola, or Arnee.

Over the Door at the entrance are the remains of a pair of Fossil Horns from the Peat Bogs of Ireland, they are commonly known by the name of the Horns of the Moose Deer of America; but this is an erroneous idea, as there is not the least affinity between them. Mons. Cuvier has lately proved that they are the remains of an animal at this time unknown; specimens have been found of above twelve feet in breadth from antler to antler. Recent Moose Horns are preserved here by which a comparison might be made. A variety of Deer and Antelope Horns also adorn this end of the room, the names of which are affixed to the specimens.

On one side of the door is the skin of an Aligator of a large size; on the other the bladder of a Whale, this had been used as a buoy to a fish Gig, from Nootka Sound, the jaw of a Shark, &c. &c.

On the wall opposite the windows are suspended in a picturesque manner, a great collection of curiosities from the South Sea Islands, brought from thence principally by Captain Cook and other Navigators; these consist of War Clubs, Spears, Arrows, Canoe-Paddles, Ornaments and various household utensils. A few of the most remarkable we shall point out to the visitor.

Marked A. Long War Clubs from the Sandwich Islands; these are formed of a species of wood almost equal in hardness to the brazilian, and superior in beauty to mahogany. When it is remembered iron and steel were wholly unknown to these people, few specimens of laborious and skilful workmanship can vie with them; the carving though with no better instrument than a shell or shark's tooth, or perhaps a flint or hard stone, by dint of industry and ingenuity is perfectly uniform in pattern, and highly ornamental.

Marked B. War Clubs or Bludgeons from New Caledonia. These though not so ornamental as the last described, are remarkable for their singular form, one of which bears a striking resemblance to the old English battle axe; the head being divided into four quarters, each quarter pointed. This in the hand of an enraged savage must have been a formidable and deadly weapon; two others shaped like our common pick-axe with one end broken off, from the same country, are very singular.

Marked C. Short Bludgeons, called by the natives Patapattoos. These are formed of a heavy and hard kind of basalt stone, and sometimes of bone; both kinds are here preserved, they are worn by the New Zealanders and natives of Nootka or King George's Sound, as daggers are by some Asiatics in their

Hall of the Elephant.

girdles, and frequently are made use of in their warlike dances;—the bone ones are from Nootka.

Miscell.

Marked D. A Pagee or short stave in the form of a small paddle, used in the warlike exercises or dances of the inhabitants of the Friendly Isles.

Marked E. A Dancing Rattle made of wood, in the form of a bird, with a few pebbles in the belly; the tail forms the handle. Captain Cook in his last voyage, regarding the music of the New Zealanders, says, "the only instruments of music which I saw among them were a rattle in the form of a bird, "and a small whistle, these are used in their musical entertainments, and "when they address strangers." He was so much annoyed by one of these rattles, as obliged him in his own defence to purchase it of the owner.

Marked F. Cloth-Beaters of wood and bone, from Sandwich Islands and Otaheite.

Marked G. Long-barbed Spears of hard wood, from Sandwich Isles.

Marked H. Spears of the same kind of wood from twelve to fifteen feet in length, barbed and pointed, with which the warriors of Owhyhee and Atowai chiefly arm themselves.

Marked I. A Fish Gig with the singular instrument for throwing it, from Onalaska. The whole of this apparatus is of curious invention, and extremely deserving the attention of those concerned in fisheries. It consists of a shaft or lance about four feet in length, of a taper form, made of wood and bone joined and spliced together. The wooden part is about three feet five inches in length, and the bone about seven inches; at the end of this bone there is a small sheath or socket for the reception of a barbed point, resembling the head of an arrow, which is made of bone, about one inch in length. To this barbed point one end of a strong line made of the sinews of the whale or hair plaited, is fixed; the other end of the line is fastened to the shaft or lance. When the gig is to be thrown, the barbed point is fixed in the sheath or socket, and a blown bladder of some animal is fastened to the smaller end of the instrument. As soon as a fish is struck, the barbed point flies off from the shaft, which by its bluntness is prevented from entering the fish, and, by the force of the blow, accelerates the motion of the barbed point, which enters deep into the fish, by whose struggling the point is drawn by the cord lengthways across the incision made by its breadth only; by which means it cannot be so easily pulled out, the two ends being opposed to the middle where the line is affixed; the shaft then floats in a perpendicular direction upon the surface of the water, which by means of the bladder, resists the efforts of the fish to draw it under, by which its pursuer is enabled to find it. These fish gigs are sometimes thrown by hand, occasionally by the singular instrument attached to it, when it acquires great force, and not unfrequently shot from a bow; in the latter case the end of the shaft is feathered like an arrow.

Marked K. A Bow from the same country; above in a semicircle are placed Arrows, Fish Gigs, and small Spears from Onalaska, Friendly and Sandwich Isles, &c. &c.

Marked L. A very elegant Spontoon or Spear of State carried by the chiefs of New Zealand, most curiously carved and ornamented with eyes, formed of the beautiful pearl of the Iris Ear Shell and ornamented with the feathers of the Poe bird.

Marked M. A Tool or Instrument used like a chisel or plane; it has a small piece of iron affixed firmly by twisted threads of the cocoa nut; from King George's Sound.

Marked N. A Canoe Paddle from Sandwich Islands.

Marked O. A Canoe Paddle from Otaheite.

Marked P. Axes or Adzes, the head is made of a very hard black stone resembling basaltes; these axes are wrought in a regular form with much labour by rubbing one stone against another; with these the natives of Otaheite and the Sandwich Islands cut the wood for their canoes, war clubs, and household utensils; the heads of these axes or adzes are firmly fastened to the handles with strong cords made of the fibres of the cocoa nut twisted together.

Hall of th Elephant.

Marked Q. Snow Shoes from Hudson's Bay, of various sizes; these are very light; and cover such a space as prevents the feet of the wearer from sinking in the snow.

Miscell.

Marked R. Nose Flute from Otaheite, formed of a joint of a Bamboo; this instrument is played on by blowing in it through the nostril.

Various Fish Hooks from Cook's River, King George's Sound, Nootka, Otaheite and the Sandwich Islands.

Many other Miscellaneous Curiosities are placed on this side of the Room, the most prominent of which, and deserving the highest attention from its great antiquity and workmanship, is a Roman Target or Shield, in a high state of preservation, and supposed to be unique. It consists of a hollowed round piece of wood, which is covered with a thick strong leather, beautifully carved; the principal figure is Minerva helmeted, her right hand holding erect a spear or lance; her left reclining gracefully on an ægis or shield of an antique form, on which is pourtrayed Medusa's head. Her attributes, the Owl, Cock, &c. surround the figure, the remainder of the surface is filled up by pointed tracery, foliage and flowers. It is an article of great rarity and beauty.

Two Horns of the Narwhall, (*Monodon Monoceros* of Linn.) or Sea Unicorn, next attracts the eye. The largest specimen is near nine feet in length, and of the thickness of a man's arm at the root. It is hollow for about a foot for receiving the spill or stump. Of all the variety of weapons with which nature has armed her various tribes, there is not one so large or formidable as this. The horn or tooth of the Narwhall is straight, gradually tapering to a point, beautifully wreathed, or twisted in a spiral manner; and is more firm and white than ivory. Before the history of the Narwhall was sufficiently known, detached teeth of this monster of the deep were vulgarly considered as the horns of the fabulous Unicorn. In the Castle of Rosenberg is still preserved a throne made for the monarchs of Denmark, which is entirely composed of the Narwhall's teeth, or, as then supposed the Unicorn's horns, it being anciently considered of more value than gold. These animals are principally inhabitants of the northern seas, though a few years since a specimen was drove on shore near Boston in Lincolnshire; and about three years since another was taken among the Shetland Isles, which has been particularly described and figured in the 1st. vol. of Trans. Wernerian Soc. Edin.

Near these horns are several specimens of the beaks or noses of the Saw Fish, (*Pristis Antiquorum*, Linn.) This fish grows to the length of fifteen feet and upwards, it is an inhabitant of the Mediterranean and Northern Seas; these beaks or noses are used by it as weapons of offence and defence. They are armed on each side with a row of strong teeth, by which they must prove a very formidable enemy to their adversaries. A complete specimen in the young state, underneath, will fully elucidate the position in which these weapons are placed in the animal.

Also the back or shell of the Green Turtle, (*Testudo Midas*, Linn.) This animal is so often seen, that it is deemed unnecessary farther to describe it here.

On the right of the beaks of the Saw Fish hangs a head and beaks of that most singular bird the Buceros Rhinoceros, or Rhinoceros Bird, from Africa, and East Indies; it is remarkable for the curious appendage on its upper mandible.

This side of the Room is also ornamented with several large branches of Coral, Gorgonia Flabellum, a specimen of the Malacca Briar, &c. &c.

At each end of the Room is an expanded skin of the Great Boa Snake, (*Boa Constrictor*, Linn.) These specimens are above twelve feet in length, and they have been found from twenty to thirty feet; it is fortunate for mankind that these serpents are not poisonous; they are therefore only to be dreaded on ac-

Hall of the Elephant. Miscell.

count of their size and strength, which latter is so great as to enable them to kill cattle and deer, by writhing themselves round, so as to crush them to death by mere pressure; these enormous serpents are natives of Africa, India, the Indian Islands, and South America, where they inhabit marshy and woody places.

On the wall at the foot of the Room is hung a variety of curious and singular horns of the Antelope, Deer, and Buffalo species, with branches of Gorgonia Flabellum, Setosa, and Antipathes Spiralis, &c.

On the floor various Skulls of Animals, amongst which are three of the Walruss, or Sea Cow, one of which has the tusks complete. This animal inhabits the Northern seas, and grows to an amazing size. The crew of Captain Cook's ship in his last voyage met with them in the frozen regions, and killed numbers of them for food, which they eat fresh; many were also salted down for their voyage, and acknowledged them to be tolerable eating, resembling coarse beef.

The Skin of the Head, and Horns complete, of the two-horned Rhinoceros, (*Rhinoceros Bicornis*, Linn.) This very singular animal, the existence of which has, by many Naturalists been doubted, is a native of the interior of Africa, and even there deemed of the greatest rarity by the natives. His skin is so hard and impenetrable, that he fears neither the claws of the tiger, nor the trunk of the elephant; it is said to turn the edge of a scymiter, and to resist even the force of a musket ball. His sense of smelling is so acute, that his pursuers avoid being to windward of him. They follow him at a distance, and watch till he lies down to sleep, when they approach, and discharge their muskets into the lower part of his belly.

On the floor, on each side of the window, at the lower end of the room, are the skulls of the Hippopotamus, or River Horse, from the great rivers in Africa, one of which has the projecting tusks. This animal is supposed to be the Behemoth, mentioned in the book of Job. Near these are two fine specimens of Fossil Trees, the bark, knots, and veins of the wood, are plainly discernable.

On the side of the window at the top, is a model of a Chinese Boat, or Swampan. Several Nests of the Hornet, or Wasp species, from Cayenne in South America. The outer shell of one of them is removed, to shew their curious internal construction. The entrance to these singular nests is at the bottom, and is contrived in such a manner, that no rain can enter; they are generally suspended from the branches of trees.

A Tooth of a Spermaceti Whale, the Beak of an Albatross, and a singularly formed Musical Instrument from Japan, fills up this niche.

On a Mahogany Cabinet stands several Antique Basons of Earthen Ware, probably from Japan.

On each side of the centre window on the floor, are two Joints or Pillars of Stone of an hexagonal form, from the Giant's Causeway, near Coleraine, in the county of Antrim, north of Ireland. These joints are on the one side concave, on the other convex, by which means they rest on each other in a strong and firm manner to the heighth of from twenty to one hundred feet. The common people of the country believe them to be a work of art, and have a tradition, that they were placed in the order they are now seen by the ancient inhabitants of Ireland, who, they assert, were of a gigantic size. Some of the learned conjecture them to be of volcanic origin, whilst others suppose that they are a regular operation of nature, and the effect of crystallization. Two interesting views of the Causeway are hung in the staircase leading to the Picture Gallery, depicting that celebrated and stupendous natural curiosity.

In the recess of the window, are placed the remains, in a fossilized state, of part of the Tusk of a Mammoth, about forty-seven inches in length. This specimen, from the great length of time in which it must have lain in the ground, is tinged of a deep ebony black, and by its mineralization, is rendered exceedingly heavy. Also parts of two Thigh Bones of great magnitude. These

remains exemplify the very enormous size which this antediluvian animal must have been. They are principally found on the rivers Ohio, Wabash, and Missouri in North America. In Siberia they have been discovered by Professor Pallas, and the Writer of this has seen a thigh bone nearly four feet in length, which was found in digging the Ellesmere canal in the year 1803, near the village of Wrenbury in Cheshire, so that in all probability this gigantic animal has been an inhabitant of this country at a very early period of time.

Hall of the Elephant.

Miscell.

In the pannel between this window and the one near the door, stands another Mahogany Cabinet, containing Minerals, Fossils, &c. On the top of it are several Sleeping Stools from Otaheite, each cut from a solid piece of wood; on these the natives, after spreading their mats on the floor of their huts, recline their heads, answering the purpose of a pillow. Also two Drums from the Sandwich Islands, one of which is formed of a cocoa nut for the top, which is strongly fastened to the wood; they are covered with a fish skin, braced on with strong plaited cords made of the fibres of the cocoa nut. These small drums the natives beat with sticks instead of their hands, as used in their large drums, and they know how to tune two drums of different notes into concord.

On the wall at the back hangs an immense piece of Matting from Sandwich Islands; it is made of the leaves of the pandanus, by the inhabitants of those islands, in which article of manufacture, Captain King affirms, "whether we regard strength, fineness or beauty, they certainly excel the whole world."

In the recess of this window are remains of Fossil Antlers of the Deer, found in the peat bogs of Ireland.

On the right side of the window are hung several Idols, carved in wood, from Otaheite, the Sandwich Islands, and New Zealand. Those from Otaheite are of a very rude form, made of the wood of the bread fruit tree, while those from Sandwich Islands are formed of the hard wood of which they make their clubs and spears, and are elegantly carved and enriched with eyes from that most beautiful shell the iris ear. An ingenious person lately speaking of these idols, says, "The spectator sighs to recollect the prevalent power of fear and superstition over the human mind, when he views the rude deformity of an idol, carved with a flint by a hand incapable of imitating the outline of nature, and that works only that it may worship."

Underneath, a large elegant Fish Hook, also from the Sandwich Islands; the inner part of the shank or shaft is of bone, the back lined with tortoise shell, the barb of the same material strongly fastened on by plaited twine of the aouta or morus papyrifera tree, to which is fastened a plaited strong cordage of the same kind, several yards in length, the other end of which is attached to a hard and heavy stone rubbed down to an elegant form, bearing a resemblance somewhat to the ace of clubs.

On the side of the above is a very singular curiosity, formed of large shells of the bulla ovum, or poached egg shell; these are strung on a strong piece of unwrought bark of the tree above mentioned, by drilling a small hole in one end This article of dress or ornament is worn by the natives of the Marquesas Islands in their warlike exercises or solemn dances, fastened round their waist, which by every motion of their body makes a prodigious noise.

Resting against the Cabinet stands a large Roman Pot or Urn, of singular shape, incrusted with the shells of oysters, from which occurrence it must have been recovered from the sea, probably fished up from the Godwin Sands, on the Coast of Kent, where Roman pottery frequently are found. Supposed to have been from the wreck of some of the ships that accompanied the invasion of Julius Cæsar.

ANTIQUE ROOM.

Antique Room.

Roman Remains.

On the left side of the Hall of the Elephant, near the entrance, an apartment is appropriated for the reception of the Ancient Roman Monuments that have been discovered principally in and about the Roman Wall, commonly denominated Graham's Dyke, running between the Clyde and the Forth, which is fully ascertained, from these stones being found along the direction of the Wall.—Vide Rudiman's notes on Buchan. Hist. p. 116. edit. Burm.

It appears by many of the inscriptions on these stones, that this wall had been erected by the Roman Legions, and that for the completion of it a space of three miles, six hundred and sixty-six paces, had been measured out to each Legion employed in this vast undertaking. Each Legion, in the front of that part of the wall erected by it, placed a stone, containing an inscription declaring the name of the Emperor, the number and title of the Legion that had erected it, and the length of the wall they had built.

Not fewer than 33 of these Roman Stones are here preserved, all of which have been discovered at various times since the year 1694, and given to the College of Glasgow by the several Noblemen and Gentlemen on whose grounds they were found. They generally consist of Inscriptions, Altars, Recumbent Figures in Sculpture, Mutilated Busts in Armour, &c. A few of the most remarkable we shall attempt to describe.

No. 1. Exhibits Victory reclining on a Globe, with a palm branch in one hand, a wreathed garland in the other, within which VEX.LEG.XX.VV. FEc.; above it is crowned with a pediment, supported by two fluted pilasters, with Corinthian capitals, on the pediment IMP.C.T. AE. HADRIANO.ANT $^{I}_{o}$NN$_{o}$AVG.PIo.P.P, on the base of the stone, a figure of a wild boar with P. P.IIII CDXI.

No. 2. is a Stone highly ornamented at each corner with a full blown flower or rose, in the centre on the top a Capricorn or Sea Goat, with IMP.AN^{T} ON.AVG.PIO.P.P. at the bottom a Pegasus, on each side a rude representation of two Eagle's Heads looking towards each other, fastened together by a rope, a figure resembling a recumbent fleur de lis is partly formed by the outline of their necks; and in the centre a tablet enclosed by a rope moulding with LEG.II.AVG.FP.IIICCLXX.

No. 3. is very curious and instructive; on one side appears a Victory about to crown a Roman Horseman, helmeted and armed with a spear and shield. Beneath him are two captives (supposed to be Caledonians) naked and bound, their little daggers resembling the modern dirks or durks lying beside them. On the other side the expanded eagle, or Roman Ensign, resting on a Capricorn, or Sea Goat, beneath which another captive, naked and bound. This is conjectured to relate to some victory gained in the course of their work, near the sea by the Second Legion. On the centre compartment IMP.CAES.T^{T}IO^{I}AE-LIO.HADRIANO ^{T}ANION^{I}No.AVG.PIO.PP.LEG.II.AVG.PEP.MP.IIIDC. LXVI.S.

No. 4. A Stone in three compartments, the one at each end resembling feathered or scaled wings, conjoined in a festoon manner, fastened by three expanded flower heads. In the centre of the festoon the outline of a heart, the center compartment within a moulded pediment, and base contains IMP. CAESAR.T.AELIO.HADRIANO.ANTONINO.AVG.PIO.P.P.VEXILLA-^{I}TO.LEG.VI.VICR.P.F.PER.M.P.III.DCLXVI.S. We shall fully describe this stone, being the most perfect, as it will answer for the illustration of most of the others.

The inscription reads in English thus:

The Emperor Cæsar Titus Aelian Hadrianus Antoninus Augustus Pius,

ather of his country, the companies of the sixth Legion, called the Victorious, built the length of this wall a space of three miles six hundred and sixty-six paces. Antique Room.

From this, and several other stones here preserved, it is concluded that this vast work was carried on, by measuring out to each Legion employed, a space of ground on the line of the wall; and from the stones already found, it appears the 2nd. 6th. 20th. and 30th. Legions were principally employed in the neighbourhood of Kilpatrick, where most of these stones have been found, (one in fine preservation, belonging to the 6th Legion, has been discovered within these few months, and added to this collection, bearing nearly the same inscription, with two males and two females supporting it.) It would appear after the completion of the first length, another division was measured out, as no less than six stones belonging to the 2nd. Legion, three to the 6th Legion, two to the twentieth Legion, and three to the thirtieth Legion, have been found, all of which are here preserved. The 2nd. Legion seems to have been most employed, or to have left the greatest number of monuments behind them, as no less than five altars, also dedicated by this Legion, are in the collection, besides the inscribed stones Roman Remains.

In the fourth line of the inscription, VICTR. the Victorious, appears to have been the honorary title of the 6th Legion, as the 1st was called the Minerva; and we find by some of the stones, that the 2nd. Legion was called the Augusta.

No. 10. An upright figure defaced, the legs are wanting; supposed to have been the figure of a Roman Warrior, a lance or spear erect in his right hand, the left hand resting probably on a small altar.

No. 15. Is curious from the inscription DISMANIBVS.AMMONIVS. DAMIONIS.COH.I.HISPANORVM.STIPENDI.ORVM.XXVII. HEREDES. F. C.

No. 16. Is monumental; the figure is very elegant, and the drapery of the Toga in a good style; it is recumbent, the right hand supporting an urn reclining on the knee; beneath the figure is a wheel, by which it has been conjectured by an eminent antiquary, that at the time of his death, he was engaged with a party on the road; behind the figure is an animal said to resemble the Musimon or Siberian Goat, probably a Highland Sheep. The opinion of the writer of this catalogue is that it is emblematic of the Clyde.

No. 17. Another figure in a recumbent posture, much more elegant than the preceding, dressed in a loose robe; the right hand wanting, and the face much defaced; the feet are naked, near the right hand on a piece of rock stands a dog.

No. 32. A small stone very rudely sculptured, representing, as supposed, Youth and Age. The largest figure represents an old man almost bent double with infirmity, resting on a stick; the other, a boy or youth, in a sitting posture, seemingly mocking the figure before it.

The College of Glasgow have had correct drawings made of all these remains of antiquity, which are faithfully engraved. We have taken the numbers as they stand engraved on their plates.

VESTIBULE.

Vestibule.

Over the door of the entrance to the grand Staircase leading to the upper apartments, is placed a cast in plaster of the head of Dr. HUNTER, moulded from the original after his decease; a similar one is placed over the corresponding door, leading from the Antiroom into the Saloon. Nat. Hist.

In the Vestibule of the Grand Staircase, leading to the Picture Gallery and Library, are placed several rare Birds, Beasts, &c. among which are,

No. 1. The PELICAN of the WILDERNESS, *(Pelicanu) Ouecrotalus*, Linn.)

Vestibule. Nat. Hist.

It is a native of Asia, Africa, and South America; is said to build its nest in dry sandy deserts. It carries water for its young in its immense pouch; from which probably arose the fabulous account of their feeding their young with their blood, and hence made an emblem of parental affection by the ancients. Osbeck says this has arisen from seeing one of these birds empty the red water bag, which it does by pressing it, and a person ignorant of the matter might easily be mistaken.

No. 2. The WANDERING ALBATROSS, or MAN OF WAR BIRD, (*Diomedea Exulans*, Linn.) This bird is frequently met with several hundred leagues from land; in its figure and manners it bears a strong resemblance to the gull species, but is of such an extraordinary size, as to astonish the beholder; frequently measuring fourteen or fifteen feet from the tip of one wing to the other.

No. 3. and 4. EIDER DUCK and DRAKE, in two Cases, (*Anas Mollissima*, Linn.) This bird is of a size between the Goose and domestic Duck, and appears to be one of the links, that connects the two species; the male bird has a beautiful tuft of sea-green feathers on each side of the neck: that beautiful substance known by the name of Eider Down is produced from this bird, which it plucks from its breast, for the purpose of lining its nest; they inhabit the Isle of May in Firth of Forth, and the remote Islands in the Western Ocean.

No. 5. The RUFF, (*Tringa Pugnax*, Linn.) The singularity of the habits of the Ruff, which is the male bird, the Reeve being the female, we cannot pass by without notice. They are migratory birds, leaving Great Britain in winter, and returning in spring; as soon as they arrive, each of the males (of which there are a greater number than females) immediately choose a spot of dry grass in the marsh, about which he runs round continually, until it is trodden bare; to this spot it appears he wishes to invite the female, and waits in expectation of her taking possession. As soon as a single female arrives, and her cry is heard, the males are roused to war, and instantly fight with great desperation. The female becomes the prize of the victor. At this time they are caught in great numbers by the fowlers, who send them to the London markets. The male bird receives his name from a beautiful ruff of feathers on his neck, and so diversified is the plumage, that you seldom see two of them alike; the female or Reeve has no tuft, and is very unlike the male; they are also numerous in Denmark and Sweden during the summer.

No. 6. KING OF THE VULTURES, (*Vultur Papa*, Linn.) The Vulture is the most ravenous of the feathered tribe. In general he devours only such animals as are dying, or that he finds dead and putrid. His sense of smell is so exquisite, that he is able to scent a dead carcase at an amazing distance. It is said that in some of the battles of the east, where vast slaughter takes place of men, elephants, and horses, voracious animals crowd to the field, of which Vultures are the most numerous; even in places where, before the battle, they have seldom been observed, the plain now will abound with them; vast multitudes will be seen hovering in the air, and descending on every side; the Indians believe they possess an instinctive presentiment of slaughter, some days before the event. They are the inhabitants of the hotter regions; and are undoubtedly a kind dispensation of Providence, as by diminishing the dead carcases they prevent putrid effluvia.

This species is about the size of a small turkey; the bill is red at the end; the middle black; the cere is orange-coloured, and is continued on the upper part, so as to form a carunculated dentated skin or flap, which hangs over one side or the other of the bill indifferently, as the bird may turn its head. The space round the eyes is of a saffron colour; the iris of the eye whitish; the crown of the head and the neck are bare; the whole of which it can draw into a large ruff of loose ash-coloured feathers, placed on the shoulders. A fillet of blackish down, arising from the hind head compasses the head; at

the corner of the bill between that and the eyes, is a purple brown spot; the upper parts of the body are of a reddish buff colour; under parts white, with a tinge of yellow; quills greenish black; tail black; craw pendulous and orange-coloured; the legs are dirty white; (the legs in this specimen are those of a turkey, the natural feet having been destroyed in the winter of 1811 by the frost) the claws black. This specimen lived several years in Ayrshire. It was presented to the Museum by DAVID SCOTT, Esq. 1813.

No. 7. The MEMINA, *(Moschus Memina*, Linn.) not much larger than a hare, but perfectly resembling a fallow-deer; the sides and haunches are spotted and barred with white, its ears are long and open, its tail short; it is an elegant little animal, but of so delicate a nature that it is with the utmost difficulty they can be brought alive into Europe, where they soon perish. They are gentle, familiar, most beautifully formed, and their agility is such, that they will bound over a wall twelve feet high; it is from Ceylon and Guinea, where they are called by the Indians Gueva. Added to the Museum by JAMES M'CAUL, Esq. Glasgow.

No. 8. The Head of the WILD BULL, or URUS. This species is chiefly met with in the extensive forests of Lithuania; it grows to a size almost equal to the elephant, and is quite black; the eyes are red and fiery, the horns thick and short, and the forehead covered with a quantity of curled hair; the neck is short and strong, and the skin has an odour of musk. The female, though not so big as the male; exceeds the largest of our bulls in size; yet her udder is extremely small. This animal, which greatly resembles those of the tame kind, probably owes its variety to its natural wildness, and the richness of the pastures where it is produced.

No. 9. The LEOPARD, *(Leopard*, Buffon.) Length from nose to tail is about four feet, the hair is short and smooth, and beautifully marked on the back, sides and flanks, with black spots, disposed in circles, four or five in each, with a single spot in the centre; on the face, breast and legs, the spots are single; the colour of the body on the back and sides is yellow, deep on the back, and paler towards the belly, which is white; its ears are short and pointed, its eye is restless; and its whole aspect fierce and cruel; inhabits the interior parts of Africa, where they abound; they come down in great numbers, and make dreadful havock among the numerous herds that cover the plains of Lower Guinea; when beasts of chase fail, they spare no living creature.

No. 10. The PECCARY, or MEXICAN HOG, *(Sus Tajacu*, Linn.) The bristles of this rare animal resemble porcupine quills in miniature; inhabits the warm parts of South America, feeding on vegetables and reptiles; is said to attack and devour the rattle-snake with impunity; is very fierce, and will fight stoutly with beasts of prey when attacked. Dr. Tyson says, it has a small orifice on the top of its back, from which a thin watery humour, of a most disagreeable smell, flows very copiously.

No. 11. The AI, or SLOTH, *(Bradypus Tridactylus*, Linn.) In this singular species we find little agreement with ordinary animals. The general laws of organized bodies at present existing, apply very little to them. The different parts of their bodies seem to be so much in contradiction to the rules we find established in the rest of the animal kingdom, that we cannot help pointing out more at large their singular organization. The whole animal appears to be a mass of weakness and imperfection; the inconveniencies of its structure seem not to be compensated by any advantage. The name Ai, is derived from the plaintive cry which he makes whilst moving, and is repeated six times, in an ascending musical series, sounding like the letters Ai.

A single glance at the proportions, and the singular structure of particular parts of the Sloth, will authorise the propriety of these remarks. The arm and fore arm, taken together, are nearly twice as long as the leg and thigh; so that when the animal would move on all-fours, it is obliged to walk on

Vestibule. Nat. Hist.

its elbows; the pelvis is so wide, and the cotyloid cavities turned so much backwards, that it cannot bring the knees together, but is obliged to keep the thighs wide asunder. Animals in general, receive their chief impulse in moving from the hind feet; good runners, as hares, having their hind feet long: but the long fore feet can only serve to impede the progress of the Ai; hence they can only employ them to cling by, and then draw after them the hinder parts of their bodies.

The articulation of the hind feet appears as if intended to prevent the animal from having any power of using them. Instead of the articulation with the astragalus being a ginglymus, allowing the foot to bend on the leg, there is a conical pit in the top of the astragalus, in which the extremity of the fibula is inserted like a pivot, the foot turning round like a vane on its staff. When the leg is vertical, the foot is nearly in a similar direction, standing on its edge, so that the animal cannot place the sole of the foot on the ground, but by stretching out the leg in almost a horizontal direction.

The toes of the animal are enclosed, quite to the nails, in a stiff skin, which will allow only of their being bent and straightened all together. Several bones, which in other animals, are always distinct, are in this joined together; thus the first phalanges of all the feet are united to the bones of the metacarpus, and metatarsus. In this manner one bone fills the place of eleven or even of seventeen: this alone must greatly impede free motion. The nails which are of an enormous length, (when the animal does not use them,) are bent under the foot, with their convex side towards the ground.

These long nails enable the animal to defend himself with considerable success, and may be regarded as the only compensation for the disadvantages of the rest of its organization; they are unable to draw back the nails as cats do, and are obliged when not in use, to curve them underneath, and thus place their convex side downwards. As in Cats, so in the Sloth, each claw is set, and retained in a bony glove-like sheath; but in Cats the upper part of the sheath is most advanced; whilst in the Sloth, the lowest part is most forward.

The Sloth, different from all other Quadrupeds, has nine cervical vertebræ; an extraordinary singularity, characteristic of this particular species.

The Sloths differ also from other animals, in having no incisors; the teeth which may be regarded as the canine teeth, are not pointed, but are rubbed down obliquely: the upper ones backwards, and the lower ones at the sides. The teeth are very simple in their construction; being a cylinder of bone, surrounded by an envelope of enamel, and hollowed at each end; at the outer end by detrition, and at the inner by defect of ossification. The enamel not entering into the body of the tooth, and the laminæ of osseous matter not being firmly connected, mastication must be very imperfect.

From this digressive sketch, it may be seen how widely different nature has formed this part of her work, even from those of its congenors. One might readily believe, that they are the remains of another order of beings, and have escaped, by some miracle, from those catastrophes which have destroyed a former world.

No. 12. Wild Cat, *(Felis Catus*, Linn.) The hair of the Wild Cat is soft and fine, of a pale yellowish colour, mixed with grey; a dusky line runs along the middle of the back from head to tail; the sides are streaked with grey, pointing from the back downwards; the tail is thick, and marked with alternate bars of black and white, it is of greater length and stronger than the Domestic Cat, and its fur much longer; it inhabits the mountainous and woody parts of this island, lives in trees, and hunts for birds and small animals, such as rabbits, hares, rats, mice, moles, &c. It frequently makes great havock among poultry; will even kill young lambs, kids and fawns, and is the fiercest and most destructive beast of prey now wild in this kingdom. This specimen was taken in the domains of the Duke of Montrose at Buchanan.

No. 13. The Otter, (*Mustella Lutra*, Linn.) The fur of the Otter is of

a deep brown colour, with two small light spots on each side of the nose, and another under the chin. Its legs are very short, but remarkably strong, broad and muscular; on each foot are five toes connected by strong membranes, like those of a water fowl; its head is broad, of an oval form, and flat on the upper part; the body is large and round, and the tail tapers to a point; the eyes are brilliant, and placed in such a manner that the animal can see every object above it, which gives it a singular aspect, very much resembling an eel or an asp; its ears are short and their orifice narrow. Although the Otter is not considered by Naturalists as wholly amphibious, it is nevertheless capable of remaining a considerable time under water, and can pursue and take its prey in that element with great facility. It inhabits a retired spot by the side of a lake or river, under a bank, where it has an easy access to the water, to which it resorts upon the least alarm, and swims with great rapidity. It destroys great numbers of fish, and in their pursuit has been observed mostly to swim against the stream; as soon as it has seized its prey it drags it to the shore, and there devours a part only (unless much presed by hunger,) it then returns to the water in search of more. Otters have been frequently tamed and trained to fish for their masters. One in possession of Mr. James Campbell, near Inverness, fished in the sea as in a river, and took a great number of Codlings and other sea fish. When it was apprehensive of danger from dogs, it sought the protection of its master, and endeavoured to get into his arms for security. It answered to its name, and would immediately obey; many other instances are recorded by different authors, as Linnæus, Buffon, Bewick, &c. Vestibule. Nat. Hist.

No. 14. The MARTIN, (*Mustella Martes*, Linn.) is not an uncommon animal in this country, it lives wholly in woods, and breeds in the hollows of trees; it produces from four to six young ones at a time. This species is the most beautiful of the Weasel kind, its head is small and elegantly formed, its eyes are lively, and its motions quick and graceful. When taken it is easily tamed, and becomes extremely playful and good humoured, its attachment, however, is not to be depended upon. Its food is nearly the same with other animals of its kind; it makes incessant war with rats, mice and other vermin; poultry, game and small birds, are its constant prey; at times it also feeds on grain, and is said to be extremely fond of honey.

No. 15. The WEASEL, (*Mustella Nivalis*, Linn.) is a very small animal, well known in most parts of this country, is very destructive to young birds, poultry, rabbits, &c. and is a keen devourer of eggs, which it sucks with great avidity; it will follow a hare, which is terrified into a state of absolute imbecility at the sight of this little animal, and yields itself up to it without resistance, making at the same time the most piteous outcries. The bite of the Weasel is generally fatal; it seizes its prey near the head, and fixes its sharp teeth into a vital part; a hare, rabbit, or any other small animal, bit in this manner, is never known to recover, but lingers for some time and dies; the wound is so small that the place where the teeth enter can scarcely be perceived. The four preceding articles were preserved and added to the collection by Mr. WM. COUPER, College, Glasgow, 1813.

No. 16. JACKALL, (*Canis Aureus*, Linn.) They vary in size, those of the warmest climates are said to be the largest. They are of a reddish brown colour; the smaller Jackall is about the size of a Fox, and the colour of a bright yellow. Jackalls go in packs of forty or fifty, and hunt in full cry, from evening till morning; they destroy poultry, and attack the flocks; they roam through the villages and gardens, and carry off every thing they can eat; they enter stables, yards, and outhouses, and devour skins, and every thing that is made of leather; nothing escapes their rapacity, they ransack the repositories of the dead, and greedily devour the most putrid bodies. They are said to attend caravans, and follow armies, in hopes of a banquet; they hide themselves in holes and dens by day, seldom appearing abroad till the evening, when they fill the air with the most horrid howlings, and begin the chase. The

Vestibule. Nat. Hist.

Lion, the Panther, and other beasts of prey, that do not hunt by scent, take advantage of the general consternation, and follow in silence, till the Jackalls have hunted down their prey, when they satisfy their own cravings, leaving the remainder for the Jackalls; hence this animal has been vulgarly called the Lion's provider.

No. 17. The SEAL, (*Phoca Vitulina*, Linn.) is found, with some exception, in almost every quarter of the globe; in the Northern seas of Asia, Europe, and America, as well as in the less frequented regions, towards the South pole.

Its usual length is from five to six feet; the body is closely covered with short hair of various colours, smooth and shining; its tongue is forked at the end; it has two canine teeth in each jaw, six cutting teeth in the upper, and four in the lower; it has five toes on each foot, furnished with strong sharp claws, which enable it to climb the rocks on which it frequently basks.

It swims with great strength and swiftness, is very playful, and sports without fear about ships and boats. It feeds on various kinds of fish, and is frequently seen near the shore in pursuit of its prey.

Seals are found in great abundance on the coasts of Great Britain; particularly in the deep recesses and caverns in the northern parts of the Island, where they resort in the breeding time, and continue till the young ones go to sea.

The growth of Seals is so amazingly rapid, that after nine tides from their birth they are as active as the old ones.

The female brings forth her young on the land, sits on her hind legs while she suckles them, and as soon as they are able carries them to sea, learns them to swim, and to search for food; when they become fatigued, she places them on her back. The young ones know the voice of their mother, and attend to her call.

No. 18. The CAPIBARA, (*Sus Hydrochærus*, Linn.) is a native of South America, and lives on the banks of great rivers, such as the Oronoque, Amazons, and Rio de la Plata; swims and dives remarkably well, and is very dexterous in catching fish, upon which it chiefly subsists; feeds mostly at night, and commits great ravages in the gardens, as it also eats grain, fruits and sugar canes; they keep together in large herds, and make a noise not much unlike the braying of an ass. It is about the size of a small hog, and by some Naturalists has been classed with that animal; its flesh is fat and tender, but like that of the otter, has an oily and fishy taste. This animal is of the greatest rarity, and we do not recollect to have seen but one other specimen in this country; it was alive in the possession of Mr. Kendrick of Piccadilly, London, about five years since.

Stair Case to the Gallery.

STAIR LEADING TO THE GALLERY OF PAINTINGS, &c.

On the walls of the stair-case are hung several valuable Prints, &c. as LE CHAMP DE DRAP D'OR. The interview of Henry VIII. King of England and the French King Francis I., between Guines and Ardres in the month of June 1520. The original picture, twelve feet one inch in length; and six feet five inches in height, is preserved in the private apartments in Windsor Castle; drawn from the original by E. Edwards, engraved by Basire.

2d. The embarkation of King Henry VIII. at Dover, May 31st, 1520, preparatory to his interview with the French King Francis I., size as the above.

3d. The encampment of the English forces near Portsmouth, together with the view of the English and French fleets at the commencement of the action, 19th July, 1655.—Engraved from a coeval painting at Cowdry in Sussex, the seat of the Right Honourable Anthony Browne, Lord Viscount Montague.—Engraved by J. Basire.

These three prints were engraved by order of the Antiquarian Society, Lon-

don, and are valued at above L.10 each; they beautifully point out the costume of the time. Stair Case to the Gallery.

4th. The stupendous performance of Leonardo da Vinci, (the Lord's Supper) who expired in the arms of Francis I. king of France.—Sir Peter Paul Rubens, delin.

5th. Two fine views of the Giants Causeway, Ireland.

6th. A large, and no doubt a very correct Map of China, with part of Tartary, done by the natives in the Chinese manner and language; it was originally preserved in a case of Bamboo, which is now placed in the Hall of the Elephant. The rarity of this map causes it to be very valuable.

Many other rare articles are intended to decorate this stair-case as soon as they can be got ready.

MEDAL ROOM.

Opposite the door opening to the Gallery of Paintings, are kept in a small closet, the Coins and Medals collected by Dr. HUNTER. The value of these is so great, that it was thought necessary to be particularly attentive to their preservation and safety; the outer door is framed of malleable iron, within which is a strong door of wood, the whole fastened by three distinct locks, the keys of which are kept by three of the Trustees, so that it is necesary for gaining admission, that all three are present. This is the only division of the Museum that is not publicly on view to strangers; but respectable persons may easily gain permission to see these valuable rarities, by a regular application to the keeper, or either of the Trustees of the Museum, who at all times feel pleasure in meeting the wishes of the learned Cognoscenti, or those who may feel interested in rare coins. Medal Room.

This grand assemblage of Numismatic rarities was acquired by the most persevering industry, and unbounded liberality of expense, and surpasses that of every other Cabinet now in existence, that formed by the Kings of France, during a succession of Reigns, excepted; the latter, before the formation of Dr. Hunter's was without a rival, but in many respects it is now confessedly inferior; even the British Museum, that great national treasure, gives way in this department, to the Cabinet of Dr. HUNTER. Before the removal of the Cabinet from London to Glasgow, the Trustees of that great national concern offered the College of Glasgow, the immense sum of L.20,000 sterling for the divisions of the first and second series alone, and to return all the duplicates, together with casts from the originals of those that were kept.

The learned Dr. COOMBE, under the auspices of Dr. HUNTER, published the first three Divisions in this Cabinet, with elegant plates of the Coins; first the Greek Cities, the second the Persian, Phœnician, Samaritan, Punic, &c. and the third division, the Greek Kings; these are also fully described, and form one of the most superb and valuable, as well as authentic works ever published on the Numismatic Science.

The Cabinet is formed on the large plan, more generally known by the name of the Complete Cabinet, containing, or meant to contain, every issue of the mint, in every age, and every country; it cost originally about L.23,000, duplicates to the amount of L.2000 were sold, which makes the actual expense of the present Cabinet L.21,000, though it is now valued at double that sum. It was formed with great care and ability, many Medals of foreign Cabinets that flowed into it having been rejected by the severity of English skill; for in no country is the practical science of Medals better understood; the acuteness and experience of our Medalists detecting forgeries which impose on the skilful of most other countries.

In the collection is a coin, in second brass, of Antoninus Pius; the reverse a female figure sitting on a craggy rock, the waves beneath her feet, the shield standing on the right side, with a military ensign erect; round the legend BRI-

Medal Room. —— Coins, &c.

TANNIA CO. meaning the colony of Britain. This coin is excessively rare and of great value; a few others are known, not many of which are considered genuine. A Briton in contemplating this coin, will have his gratification diminished, when he finds, that it records the conquest of his native island.

Tetortobolian Dicholchos, or Quarter Obolus, in silver, which is the most minute coin found, weighing 2¾ grains; these coins being so very small, it cannot be wondered at, that most of them have perished. There is also a Dilepta of the Greek Copper coinage of Athens; these little pieces have the symbol of two owls impressed on them in imitation of the silver Diobolus

A Gold Coin of Thebes, much worn, weighing 59 grains, very rare; also a Gold Didrachm of Athens, weiging 132½ grains, only one other is known, which is now in the Cabinet of his present Majesty who originally possessed both; the Queen procured this for Dr HUNTER.

There are no less than fifteen Roman Denarii with the double female head; these are supposed to be of the earliest Roman Coinage known, also the ancient Scruple, coined at the time when forty-five were struck from a pound of gold; also the Didrachm or Aureus of LX. and XX. The Otho of large brass struck at Antioch, is also very rare, valued at L 50.

There are about four hundred Medallions exclusive of Egyptian; all of great rarity, save in one or two instances, and reckoned of such princely purchase, that even in the richest Cabinets twenty or thirty are esteemed a great acquisition. The most remarkable among these, is one struck at Syracuse, the only one perhaps existing; it formerly belonged to Dr. COOMBE, and was engraved by him, though not published; it is of the most exquisite workmanship, by a Sicilian artist, in a state of the highest preservation, of copper, about two inches in diameter; upon one side is a female head, covered with a helmet, on which is a Caduceus and ROMA; upon the other a man's head with a helmet wreathed with laurel, and M.M. Dr. COOMBE's opinion is that this fine piece was struck at Syracuse, in honour of Marcus Claudius Marcellus, who beseiged and took that city 210 years before Christ. Plutarch in his life of Marcellus says, that the Syracusans accused Marcellus before the Senate of pillaging their city; he was acquitted, and the natives who had been incited by his enemies, were not only pardoned by him, but the Senate at his mediation, confirmed to them their liberty and laws. For this reason, says Plutarch, besides other signal honours with which they distinguished Marcellus, they made a law that whenever he, or any of his descendants entered Sicily, the Syracusans should wear garlands, and offer sacrifices to their gods. One of the signal honours alluded to by Plutarch seems to have been this Medallion; which is very remarkable, as being unique, in high preservation, and the portrait of this great man.

There is also an unique Medal of Otacilla, and two brass Medallions of Augustus, struck by an African Colony, very rare; reverse, a Bacchante, with Cup and Thyrsis, and a Panther at her feet, with Punic characters.

Among the smaller Medallions or Medallets, which in most cases are scarcer than the larger, will be seen one of Severus, and Julia Mamæa, face to face; reverse, three figures, with *Felicitas temporum*.

A silver Hemidrachm of Alexander the Great, the only one known; it represents him very young, and supposed to have been struck soon after his coming to the throne; also a unique coin of Gangra in Paphlagonia, with a view of two castles and a house between them; it formerly belonged to Dr. COOMBE, by whom it was engraved, and was originally brought from the East by Mr. M'Kenzie.

Among the Persian coins, are some very rare specimens, as one with a Ram on one side and a long Legend; the reverse, a sacred symbol of this form $\overset{o}{\dagger}$ in a hollow square; another has a King on horseback on the obverse, and an Archer kneeling in the act of shooting on the reverse; it weighs 168 grains,

and is supposed to be a silver didrachm. The great number of Persian coins add much to the value of this superb Cabinet. Medal Room.

Coins, &c.

Coins of the Sassanidæ, (of which there are twenty-two in silver, and seven in second brass,) and Arsacidæ; among the former will be seen that famous coin brought from the East by Mr. CROFTS; it represents three portraits on the obverse, supposed to be the King and Queen with the Prince.

Among the Greek Cities are many unique coins of great value; it will be impossible in our limits to particularize but a very few.

First a Silver Coin of Macedon, struck by Perdiccas II. it is a Hemidrachm, minted about 458 years before Christ. A Silver Tetradrachm of Pausanias, struck about 398 years before the Christian æra.

A Silver Hemidrachm of Lysimachus; reverse, a Lion. This is supposed the only true portrait of this prince in existence, and was minted about 268 years before Christ. A very rare coin of the kingdom of Syria, representing Tigranes the Younger, king of Armenia; reverse, his Sister; they were son and daughter of the famous Tigranes; the Lady's name is lost by the coin being so much worn, and is not preserved by historians, it is of the third brass.

Of the kingdom of Cassandria, one solitary coin is only known, and is here preserved; on its obverse is a man on horseback with the Greek legend, ΒΑΣΙΛΕΩΣ ΑΠΟΛΛΟΔΟΡΟΥ, (King Apollodorus;) on the reverse a Lion; this king flourished in the time of Antigonus Gonatus King of Macedon, 278 years before Christ. Of the kingdom of Arabia remains a unique coin of Manus; reverse, Abgarus; in third brass.

Of Palmyra an Unique Greek Coin in third brass, of Timolaus son of Zenobia; this is valued at L.20.

Among the Roman Emperors will also be found many rare and curious remains, as a Cneius Pompeius, the Son, valued at L.20. A Pescennius Niger of the first brass, unique, struck at Smyrna, and valued at L.50. A Nigrianus in third brass, valued at L.10. An Egyptian Coin of Julius Cæsar, the head laureated; reverse, a Crocodile, on the exergue Ægypto; very rare.

There are in this Cabinet no less than eleven Silver Coins with the Tortoise on one side, and an indented mark on the other, about which Medallists and Antiquarians are so much divided in opinion. They are with some plausibility given to the island of Ægina, and supposed to have been struck in the days of Phidon. This king, according to the Arundelian Marbles, reigned 820 years before Christ. If this opinion is correct, these are of the most ancient coinage known.

Having enumerated a few of the most rare coins of other countries, we shall proceed to describe a few of our own.

An Unique Coin of Egbert king of Kent; it is a skeatta of that monarch, coined about the year 664. A Penny of Richard III. very rare. Two Skeattas of Beorna king of the East Angles; these are unique, and are valued at L.10 each. A Skeatta of Eadwald king of Murcia, another only is known, valued at L.10. One of Egbert, son of Offa king of Kent, of the same rarity and value. Unique Coin of Beorthric king of the West Saxons, value L.10. Unique Coin of Edwin chief Monarch, with his head, value L.20. One of Regnald king of Northumbria, very rare.

Among the Gold Coins is the Quarter Florin of Edward III. struck in his 18th year, unique, or nearly so, valued at L.20.

The Gold Chaise of Edward the Black Prince, unique, fig. by Pinkerton in his History of Medals, valued at L.20.

The pattern Guinea of Queen Anne, with A. R. in the centre of the Arms on the reverse; very rare, and valued at L.20.

The Ryal of Mary Queen of Scots, very rare; on the reverse are her Arms, 1555; valued at L.20.

The French Testoon, representing Mary and Francis face to face; is so rare that Dr. Hunter paid ten guineas for this.

Medal Room.

Coins, &c.

The Trial Piece for a Crown struck by that skilful engraver, Thomas Simon, as a petition to Charles II. in the finest preservation; it is the greatest effort of skill known in the Numismatic Science; it has a double row of letters round the edge; it is said that not more than twenty were ever struck. They are now so very rare, that the writer, a few years since, at the sale of Mr. Tyssen's cabinet of coins in London, saw a specimen, not in fine preservation, fetch the sum of one hundred guineas.

The Coins of Oliver Cromwell are also of the engraving of Simon, and stand unrivalled; the fine frost work of the flesh giving them a beautiful appearance.

The beautiful Coinages also of Blondeau, Ramage, and Rotier, who engraved Dies for Charles II. are all here in the highest state of preservation; they were mostly trial pieces, and have not been in circulation At Mr. Tyssen's sale, Ramage's pattern for a crown sold for L.31 : 10 : 0; the half crown, L.26 : 5 : 0; the shilling, L.26; Blondeau's sixpence, L.7; the half crown, L.7; the half crown with Truth and Peace, Petre Blond. L.30 : 10 : 0; and a half crown with *Reddite Quæ Cæsaris*, L.45.

Here is also a fine collection of the rude pieces of silver used as coinage during the unfortunate troubles of Charles the I. known by the name of Siege Pieces, bearing the names of Newark, Carlisle, Pontefract, &c. stamped with

S. D. S. D. D.

their value in numeral letters, as II. VI. V. IX. and VI. It is singular that two of these pieces are evidently cut from the same piece of plate, as they perfectly match; probably from a silver cup or tankard.

Also all the coinage minted by that famous artist Mr. Croker, the engraver for Queen Anne's mint, among these are the trial pieces, commonly called Queen Anne's Farthings. struck in gold, silver, and copper. Of these there are four dies, as 1713 the most common; 1714 the next in rarity; the third has on the reverse, *Pax Missa per Orbem*, where the Queen is seated under a canopy; and the fourth, which is the most rare, has on the reverse Britannia driving the Edissarium, or Antique Chariot. Almost every one has heard of the farthings of Queen Anne, but the truth is they are of no great value; 1713 is not worth 5s.; 1714 not 10s.; Pax missa, &c. about L.1 and the chariot about 40s.; Anne being always averse to a copper coinage, though much wanted. Mr. Croker exerted his abilities in engraving these dies, hoping their elegance and beauty would merit her attention, but it was to no purpose; the Queen could not be brought to hear of a copper coinage, and the nominal Queen Anne's farthings are these trial pieces.

Among the British Medals will be found that very elegant Gold Medal of David II. king of Scotland, struck when that Prince was a captive in England; only two are known to exist; they were discovered a few years since in Yorkshire. Also that curious Silver Counter, figured by Snelling, supposed to have been struck about the time of Henry VI.; it has arms on both sides, with this legend, on the obverse, *Jehan Strangeways Escuier*, on the reverse, *Tresorier de Normandie.*

Almost a full and complete series of all the Medals in gold, silver, and copper, struck in this and other countries, will be found in this Cabinet.

GALLERY OF PAINTINGS AND LIBRARY.

Gallery of Paintings and Library.

On entering these superb rooms the eye is highly gratified with the taste and elegance of the Dome rising from the centre, supported by eight massy stone pillars of the Corinthian order, on each side of which, corresponding apartments are appropriated for the reception of the choice collection of paintings formed by Dr. Hunter.

In these apartments are six handsome cabinets painted in fresco, with gold mouldings, which, together with five elegant glass cases on mahogany Grecian stands, contain an immense assemblage of the most rare and beautiful

Shells arranged according to the Linnean method; elegant seats covered with crimson, occupy the spaces between the cabinets, in addition to which, are several handsome Grecian chairs, in which the visitant may rest, and contemplate with delight the *tout ensemble*. Gallery of Paintings and Library.

PAINTINGS.

We shall give a list of the whole, with the names of the Painters, adding a few short notices on the principal subjects. Paintings.

No.	Subjects.	Masters.
1	Lady Maynard, three quarters length,	Sir Joshua Reynolds
2	Countess Harcourt, do.	Roslin, Paris
3	Dr. Radcliff, do.	Sir Godfrey Kneller
	This picture was purchased from the collection of the late Dr. Mead.	
4	Head of St. Francis,	Dominico Feti
5	Head of a Boy,	Murillo
6	Good Shepherd,	Ditto
	L.2000 was offered for this picture prior to its leaving London.	
7	The Elk,	Stubbs
8	Professor Baillie,	Pine
9	Anatomist,	Holbein
10	Fruit Piece,	G. Gray of Newcastle on Tyne
	Presented by Thomas Hedley, Esq. of Newcastle	
11	Landscape View in Holland,	Rembrant
12	Old Man,	Ditto
13	Hunting the Stag,	Wouverman
14	Man making Wine,	Charadin
15	Old Woman selling Fruit, and Cattle watering,	Le Nain
16	Dead Game and Fruit,	Snyders
17	Woman cleaning a Frying Pan,	Charadin
18	Dutch Lady drinking Tea,	Ditto
19	Sir Isaac Newton, from the late Dr. Mead's collection.	Sir Godfrey Kneller
20	Dr. Arbuthnot,	Ditto
21	Landscape,	Weinix
22	Dr. Charlton the Physician, from Dr. Mead's collection.	Sir Godfrey Kneller
23	Animal,	Stubbs
24	Mrs. Baillie Wife of the Professor Baillie, on the other side of the Room, and Sister of Dr. Hunter,	Pine
25	Vesalius the great Anatomist, from the late Dr. Mead's collection, purchased by Dr. Hunter for only L.33. If this fine picture could be brought to the hammer it would bring ten times the sum,	Titian
26	Female Head,	Luco Giordiano
27	St. Appollonia,	Domenichino
28	Female Head with Turban,	Rembrant
29	Boy Singing,	Andrea Sacchi
30	St. Catharine, from Sir Luke Schaub's collection,	Dominico
31	Student shewing his Drawings,	Jan Stein
32	Entombing Lazarus, a Sketch,	Rembrant
33	Flight of the Holy Family,	Nic. Poussin
34	Tomb of Phæton,	Francisco Mille
35	An aged King resigning his Crown,	Francisco Grimaldi called the Bolognese

Gallery of Paintings and Library.

Paintings.

No.	Subjects.	Masters.
36	Landscape,	Swaneveldt
37	Flight of the Holy Family,	Pietro de Cortona
38	Tobit and the Angel,	Bolognese
39	The detection of Laomedon,	Salvator Rosa
40	Virgin and Angels.	
41	Salutation.	
42	Danae and Golden Shower,	Giordiano
43	Lady at her Toilet,	Guido
44	Virgin and Child,	Corregio
45	Birth of St. John the Baptist,	Paul Veronese
46	A view up the great Canal of Venice, from Dr. Mead's collection.	Canaletti
47	Bothwell Castle,	Master unknown / Modern
48	The hunting of Actæon by Diana,	Zuccarelli
49	Hercules and Dejanira,	Ditto
50	Holy Family on Marble,	Stella
51	Cavern Scene, fire light,	Smith
52	Head of St. Peter,	Rubens
53	Entombing Christ,	Schidone
54	Virgin watching over our Saviour asleep,	Guido

This matchless picture was purchased from Sir Luke Schaub's collection for L. 328 : 13 : 0. It has been valued lately by an eminent Artist at 2,000 Guineas.

Library.

LIBRARY.

The Apartments beyond the Gallery of Paintings contain the magnificent collection of Books and Manuscripts; this department of the Museum of Dr. HUNTER being justly celebrated as one of the most valuable depositaries in Britain of the Literature of past ages. The eminent Collector of this inestimable treasure of Literary Curiosities, enriched it with the most munificent liberality, when the great Libraries of Askew, Ratcliffe, West and Croft were sold. It comprises more than twelve thousand volumes, in the highest preservation, among which are many beautiful specimens of almost every press, since the introduction of the art of Printing. To enable the visitor still further to appreciate its extent and value, a selection will be made of the works it contains printed during the 15th century. Many others apparently of as great antiquity and rarity, have been omitted, because their precise dates could not be ascertained. This selection, with a few elucidatory notices regarding the other departments, (all of great curiosity and splendour), will, perhaps, be sufficient to afford a correct estimate of the whole.

The subsequent list cannot fail to be highly interesting to every person attached to Bibliography and Literary History, although it merely gives the names, editions, size, and date, of these early, rare, and precious books. Bibliographical illustrations of many of the works are contained in the volumes of De Bure, Fournier, Peignot, Cailleau and Panzer; and in this country, the identical copies in the Library have called forth the erudition and research of Messrs. Beloe, Bridges, Savage, Clarke, and the most distinguished of modern Bibliographers, Mr. Dibdin.

Auctores Classici et Antiqui.

Æsopi Fab. Gr. Ed. Pr. 4to.	Mediol. circa 1480
Ambrosius de Off. Ed. Pr. 4to.	Romæ, 1470
Ambrosius St. super Lucam, fol.	Augt. 1476

Appianus, Ed. Pr. fol.	Venet. 1472	Library.
Appianus, fol.	Venet. 1477	———
Appianus, 4to.	Venet. 1477	Auctores
Apollonii Rhodii Argonautica, Ed. Pr. 4to.	Flor. 1496	Classici.
Apuleii, (L.) Opera. Ed. Pr. fol.	Romæ, 1469	
Apuleius, (L.) fol.	Vicent. 1488	
Aristophanes, Ed. Pr. fol.	Ald. 1498	
Aristotelis Opera, Ed. Pr. 6 vol. fol.	Venet. 1495	
Aristotelis, Eth. Lib. Ed. Pr. fol.	Sine Anno	
Aristoteles de Hist. Anim. fol.	Venet. 1476	
Aristoteles cum Simplicii Comment. fol.	Vincent. 1479	
Astronomici Veteres, fol.	Ald. 1499	
Augustini, (B.) Liber de Vita. Ed. Pr. 4to.	Mogunt. 1467	
Augustini, (St.) de Civ. Dei. Ed. Pr. fol.	Sine Anno	
Augustinus, (S.) de Civ. Dei. fol.	Romæ, 1468	
Augustinus, (S.) de Civ. Dei. fol.	Venet. Spira. 1470	
Augustinus (S.) de Vera Vita, 4to.	Mogunt. circa 1470	
Augustinus (B.) de Civ. Dei. 2 vol. fol.	Mogunt. 1473	
Aulus Gellius, fol.	Venet. Jenson 1472	
Aulus Gellius, fol.	Venet. 1496	
Ausonii Epigram. Ed. Pr. fol.	Venet. 1472	
Basilii Magni Epistolae, fol.	Venet. Ald. 1499	
Biblia, 2 vol. fol.	Mogunt. 1472	
Biblia, 2 vol. fol.	Norimb. 1475	
Biblia, Lat. fol.	Norimb. 1475	
Biblia, Lat. fol.	Venet. Leon. Basil. 1476	
Biblia, Lat. 2 vol. fol.	Paris. 1476	
Cæsar, fol.	Romæ, 1469	
Cæsar, fol.	Parmæ, 1477	
Catullus, Tibullus et Propertius, Ed. Pr. fol.	Venet. 1472	
Catullus, Tibullus et Propertius, fol.	Imp. Regii. 1481	
Celsus, Ed. Pr. fol.	Florent. 1478	
Celsus, fol.	Mediol. 1481	
Celsus, fol.	1493	
Chrysostomus (J.) de Repar. Ed. Pr. 4to.	Mogunt. Fust.	
Chrysostomi (J.) Homelia, fol.	Rom. 1470	
Chrysostomus (J.) Sermon. 4to.	Bonon. 1475	
Cicero de Off. Ed. Pr.	Mogunt. Joan. Fust. 1465	
Cicero de Off. fol.	Paris. 1477	
Ciceronis Rhetor. fol.	1476	
Ciceronis Rhetor. fol.	Paris. 1478	
Cicero de Oratore, Ed. Pr. fol.	Romæ,	
Cicero de Oratore, fol.	Venet. 1468	
Ciceronis Orationes, Ed. Pr. fol.	Venet. Spira 1470	
Ciceronis Orationes, fol.	Venet. 1472	
Ciceronis Orat. Phil. Ed. Pr. fol	Romæ,	
Ciceronis Orat. Phil. fol.	Venet. 1480	
Ciceronis Tus. Quest. fol.	Gering Paris.	
Cicero de Finibus, fol.	Venet. 1471	
Cicero de Finibus, fol.	Venet. 1480	
Cicero de Nat. Deor. Ed. Per. fol.	Venet. 1471	
Ciceronis Epist. Famil. fol.	Venet. 1470	
Ciceronis Epist. Famil. fol.	Venet. 1771	
Ciceronis Epist. Fam. fol.	Mediol. 1475	
Ciceronis Epist. Fam. fol.	Vicent. 1479	
Ciceronis Epist. ad. Att. Ed. Pr. fol.	Venet. Jenson. 1470	
Ciceronis Epist. fol.	Romæ, 1470	
Claudiani Opera, Ed. Pr. fol.	Vicent. 1482	

Library.

Auctores Classici.

Columela, Rerum Rust. Ed. Pr. 2. vol. fol. - - - Venet. 1471
Cypriani Epist. Ed. Pr. fol. - - - - Circa 1470
Cypriani (B.) Epist. fol. - - - - - Spira, 1471
Dictys Cretensis, 4to. - - - Messanæ 1498
Diodorus Siculus, Ed. Pr. fol. - - - Bonon. 1472
Diogenis, (L.) Vitæ, Ed. Pr. fol. - - Venet. 1475
Diomedes, de Arte Gram. 4to. - - Paris. 1498
Dionysius, 4to. - - - 1480
Dionysius, Lat. Ed. Pr. fol. - - Tarvisii, 1480
Epigram. Gr. 4to. - - - Florent. 1494
Euclidis Ele. Geo. Ed. Pr. fol. - - Venet. 1472
Eusebii Opus de Præpar. Ed. Pr. fol. - - 1473
Eusebii Historia Ecclesiastica, Ed. Pr. fol. - 1474
Eusebius, 2 vol. Græce, fol. - - - Mantuæ, 1479
Eutropius, Ed. Pr. 4to. - - - - Romæ, 1471
Exempla Sacræ Scrip. Ed. Pr. fol. - - - Circa 1470
Festus Pompeius, 4to. - - - 1477
Herodianus, fol. - - - Bonon. 1493
Herodianus, fol. - - - Venet. Ald. 1495
Herodotus, Ed. Pr. fol. - - - Venet. 1474
Herodotus, fol. - - - Romæ, 1475
Hieronymi (B.) Epist. 2 vol. fol. - Mogunt. Gerngheym, 1470
Hieronymus (Liber Flosculorum et Transitus S.) Ed. Pr. 4to. 1475
Homeri Ilias, 2 vol. Ed. Pr. fol. - Florent. Nerlius, 1488
Homeri Odyssea, Ed. Pr. fol. - Florent. Nerlius, 1488
Horatius, fol. - - - Med. 1474
Horatius, fol. - - - Med. 1476
Jamblichus, fol. - - - Venet. 1497
Josephi Opera, Lat. Ed. Pr. fol. - - August. 1470
Josephus, Lat. fol. - - - Romæ, 1475
Isocrates, Ed. Pr. fol. - - - 1493
Justini Hist. fol. - - - Romæ, 1472
Justini Hist fol. - - - Venet. 1479
Juvenalis, fol. - - - - Romæ, 1474
Juvenalis, fol. - - - - Romæ, 1474
Juvenalis et Persius, fol. - - Louvaniæ, 1475
Lactantii (F.) Opera, fol. - - Romæ, 1468
Lactantii Opera, fol. - - - Gen. 1471
Lactantius de Div. Inst. fol. - - - 1472
Lactantius, fol. - - - Romæ, 1475
Lactantius, fol. - - - Rostochii 1476
Lactantius, fol. - - - Venet. 1478
Livius, fol. - - - Tarvisii, 1482
Lucretius, fol. - - - Verona, 1486
Macrobius, Ed. Pr. fol. - - Venet. 1472
Marcellinus (Am.) Rerum Gest. Ed. Pr. fol. - Romæ, 1474
Martialis, 4to. - - - Venet. 1475
Ovidius, Ed. Pr. 2 vol. fol. - - Romæ, 1471
Ovidius, fol. - - - Bonon. 1471
Ovidius, fol. - - - Venet. 1486
Pauli (St.) Epist. Lat. Ed. Pr. 4to. - - Paris, 1491
Petronius Arbiter, 4to. - - Venet. 1499
Phalaridis Epist. Lat. 4to. - - Tarvisii, 1471
Plautus, Ed. Pr. fol. - - - Venet. 1472
Plinii Hist. Nat. Ed. Pr. fol. - - - Spira, 1469
Plinii Hist. Nat. fol. - - - Venet. 1472
Plinii Hist. Nat. fol. - - - Parmæ, 1476
Plinii Epist. fol. - - - Neapoli, 1476

Plutarchus, Ed. Pr. fol.	Romæ Gall. circa 1460	Library.
Plutarchus, 2 vol. fol.	Venet. 1478	———
Pomponius Mela, 4to.	Venet. 1478	Auctores
Prisciani Oper. Gram. Ed. Pr. fol.	Venet. Spira, 1470	Classici.
Priscianus, fol.	1476	
Priscianus, fol.	Ven. 1481	
Probus, (Æmilius) Ed. Pr. fol.	Venet. 1471	
Psalterium, Gr. et Lat. fol.	Med. 1481	
Quintilianus, fol.	Venet. Jenson 1471	
Sallustius, Ed. Pr. fol.	Venet. Spira, 1470	
Sallustius, fol.	Mediol. 1474	
Sallustius, fol.	Venet. 1478	
Sallustius, de Conjurat. Catil. fol.	Florent. 1478	
Seneca, A. D. M.CCCC LXIII. per Joannem Fust.		
Seneca, ed. Vet. fol.	Venet.	
Senecæ Tragediæ, Ed. Pr. 8vo.	Gering. 1470	
Seneca, (Ital.) fol.	Venet. 1494	
Suetonius, Ed. Pr. fol.	Romæ, 1470	
Suetonius, 2 vol. fol.	Med. 1475	
Suetonius, fol.	1480	
Strabonis Geographia, fol.	Venet. 1472	
Suidæ Lexicon, Ed. Pr. fol.	Med. 1499	
Terentius cum Commentario Donati, Ed. Pr.	Venet. Spira, 1470	
Valerii Maximi Opera, Ed. Pr. fol.	Mogunt. 1471	
Valerii Maximi Opera, fol.	Venet. Spira, 1471	
Valerii Maximi Dict. Ed. Pr. fol.	Circa 1470	
Valerius Flaccus, Ed. Pr. fol.	Romæ, 1474	
Varro, (M. T.) de Ling. Lat. Ed. Pr. fol.	Circa 1470	
Varro, de Ling. Lat. fol.	1483	
Virgilius, Ed. Pr. fol.	Sine Anno,	
Virgilius, fol.	Venet. Spira, 1470	
Virgilius, Lit. Goth. ed. fol.	Circa 1470	
Virgilius, cum Notis Servii, fol.	1471	
Xenophon, Ed. Pr. fol.	Med. 1467	

Auctores Recent. Miscellanei Variis Linguis.

Abano, (P. de) Consil. Ed. Pr. fol.	Mant. 1472	Auctores
Abano, (P. de) Consil. fol.	Venet. 1476	Recent.
Adriani Cartusienses, Liber de Rem. Ed. Pr. fol.	1470	
Albertus Magnus de Mysterio Missæ, Ed. Pr. fol.	Ulmæ, 1473	
Albertus Magnus de Anim. fol.	Mant. 1479	
Albertus Magnus Compend. Ed. Pr. 4to.	Venet. 1476	
Albertus Magnus de Anim. fol.	Venet. 1495	
Albertus de Re Med. Ed. Pr. 4to.	Flor. 1485	
Alexandri Magni Vita, Ed. Pr. 4to.	Trevisii, 1474	
Antonini, (P. D.) Confessionale, Ed Pr. 4to.	Ven. 1473	
Antonini Summa Theol. Pars Prima, Ed. Pr. 4to.	Sine Anno,	
Antonini Summa Theol. Pars 2da. 4to.	Venet. 1475	
Antonini Summa Theol. Pars 3tia. 4to.	Venet. 1477	
Aretini, (F.) Libellus, 4to.	Neapol. 1475	
Aretini, (F.) Epist. 4to.	Flor. 1487	
Aretini, (I.) 4to.	1475	
Aretino, (L.) La Hist. fol.	Ven. 1476	
Aretinus, (L.) de Stud. 8vo.	1477	
Aretini, (L.) Calp. Ed. Pr. fol.	1478	
Aretino, (La Historia Fiorentina Di) Ed. Pr. fol.	Veneg. 1476	
Atilæ Hist. Ed. Pr. 4to.	Venet. 1472	

Library. Auctores Recent.

Averrois, Lib. de Med. Ed. Pr. fol.		1482
Avicennæ Opera, Ed. Pr. 4to.	Ven.	1486
Bagellardus, (P.) de Ægrit. Ed. Pr. 4to.		1472
Bagellardus, (P.) Opus, Ed. Pr. 4to.		1472
Bartholomæi Anglici Opus de Prop. fol.		1482
Bartolus, Super Primam Partem Codicis Lecturæ, Ed. Pr. fol.	Spira, Venet.	1477
Bartolus, fol.	Venet.	1476
Bartolus, fol.	Venet.	1475
Barzizii, (C.) Introduct. Ed. Pr. fol.		
Benedictus de Conserv. Sanitatis, Ed. Pr. 4to.	Venet.	
Bessarionis, (Card.) Platonis Defensio, Ed. Pr. fol.	Romæ,	1469
Bessarionis Epist. et Orat. Ed. Pr. 4to.		1471
Biblia Italica, 2 vol. Ed. Pr. fol.	Venet.	1471
Bocaccio, (M. Giov.) Filocolo, Ed. Pr. fol.		1472
Bocaccio, (M. G.) Decamerone, fol.	Bonon.	1476
Boccalii, (I.) Geneal. Deorum, Ed. Pr. fol.	Venet.	1472
Boccalii, (J.) Geneal. Deorum, fol.	Venet.	1473
Boccalii, (I.) Geneal. fol.	Regii,	1481
Boccius, (A.) de Phil. Ed. Pr. fol.	Norimb.	1476
Bonifacii, (Pont. viii.) Decret. Lib. Sextus, fol.		1477
Bonifacii, (Pontiff. viii.) Decret. Liber Septimus, fol.	Basil,	1473
Borro (C.) Triumphi, Ed. Pr. 4to.	Bressæ,	1498
Brant (S.) Stultifera Navis, fol.	Basil,	1478
Breviarium Romanorum, fol.	Venet.	1478
Brunnetto, Tesoro di. Ed. Pr. fol.	Trev.	1474
Burley, (W.) de Vita. Ed. Pr. 4to.	Colon. circa	1470
Calderini (D.) Comment. fol.	Romæ,	1474
Canis, (J. J.) Opus, 4to.		1476
Cauliaco, (Guido de) Chirurg. fol.	Venet.	1489
Cerlata (P.) Cirurgia, fol.	Bonon.	1492
Chronica ab Indic. Mundi, fol.	Norimb.	1493
Cornazani, (Antonia) Poeta, Ed. Pr. fol.		1472
Cornazani Discorsi, 4to.		1473
Cresentius, (P. D.) Rural. fol.	Lovan.	1474
Danti, (A.) Opere, fol.	Venet. Spira,	1477
Decretorum Codex, fol.	Ven.	1474
De Monte Regio, (Joannis) fol.	Venet.	1496
Dissertationes Variæ, fol.	Venet.	1471
Duns, (J) Scotus, Script. fol.	Venet.	1477
Durandus, (G.) Rat. Div. Off. fol.	Romæ,	1473
Epistolæ Divers. Phil. 2 vol. 4to.	Venet. Ald.	1499
Fasciculus Temporum, Bl. Let. fol.		1476
Fenestella, (L.) De Rom. Ed. Pr. 8vo.	Flor.	1478
Ficheti (G.) Liber Rhet. 4to.	Paris.	1470
Ficinus, (M.) De Sole Liber. Ed. Pr. 8vo.	Flor.	1493
Ficini, (M.) Epist. Ed. Pr. 4to.	Flor.	1494
Ficini, (M.) Epist. fol.	Venet.	1495
Fiore Novello, Test. Ed. Pr. fol.		1473
Flavii, (B. F.) Italia Illust. Ed. Pr. fol.	Romæ,	1474
Fortalium Fidei, fol. edit. vetusta	Circa	1470
Frontinus (S. J.) de Re Mil. fol.	Bonon.	1496
Gazius (A.) fol.	Venet.	1491
Gentilio Expos. fol.		1477
Gersonno, (I. de) Opuscula, fol. Ed. Pr.	Circa	1470
Gordonis Pestil. fol.		1482
Gordonio Pract. Med. fol.		1486
Gordonis (B.) Pract. Med. 8vo.	Ven.	1496

Library.

Auctores Recent.

Grampeck (J.) de Pest. 4to. - - - August. 1496
Gregorii (IX.) Decretalia, Ed. Pr. fol. - Mogunt. 1473
Gregorii (IX.) Decretalia, fol. - - Venet. 1481
Gregorii (IX.) Papæ Omiliæ, fol. - - Paris. 1475
Haly Abbatis, fol. - - - Ven. 1492
Herbarius, 4to. - - - Mogunt. 1484
Herp (H.) Speculum, Ed. Pr. fol. - - Mogunt. 1474
Historiæ Notabiles. 4to. - - Colon. 1474
Jeronymus de Manfredis, fol. - - Bonon. 1474
Justino Vulgarizzato, Ed. Pr. fol. - - Venet. 1477
Largillatæ (P. de) Opus Chir. Ed. Pr. fol. - Brix. 1480
Largillatæ (P. de) Opus Chir. fol. - - Venet. 1497
Lascaris (C.) Gram. Gr. 8vo. - - Aldus, 1494
Lascaris (J.) Anth. 4to. - - - Flor. 1494
Leo (Beatus Papa) Opera, Ed. Pr. fol. - - Romæ, 1470
Le Vite de Sancti Padri, fol. - - Venet. 1475
Litio (R. de) Sermones, Ed Pr. fol. - - Ven. 1472
Litio (R.) Sermones, fol. - - - Neap. 1473
Ludolphus, (Carth.) De Vita Christi. fol. - - 1474
Magnincis, Reg. Sanit. 4to. - - Paris. Gering. 1483
Magnincis, Reg. Sanit. 4to. - - Lovan. 1486
Macer. de Nat. Qual. 4to. - - Neap. 1497
Maius (J.) de Pris. fol. - - - Neap. 1475
Mammetractus Expos. Bibl. Ed. Pr. fol. - - Mogunt, 1470
Manerbi (N. de) Le Legende, fol. - - Venet. 1475
Manutii Aldi Dict. Gr. et Lat. Ed. Pr. fol. - Venet. 1497
Marcelli Compend. fol. - - - Brix. 1483
Marcellus, fol. - - - - Venet. 1498
Martius, Refut. 4to. - - - Bonon. 1476
Menila in Juv. fol. - - - Tarvisii, 1478
Messuæ (G.) Deila Consol. Ed. Pr. fol. - - Mant. 1475
Michael Med. Serm. Ed. Pr. 4to. - - Venet. 1476
Modestus de re Mil. Ed. Pr. 4to. - - Venet. 1474
Mundinus Anthomia, Ed. Pr. 4to. - - Pass. 1478
Mundinus Anthomia, 4to. - - Venet. 1494
Musuri (M.) Etymol. Ed. Pr. fol. - - Venet. 1499
Nicioli Florentini, Sept. Sermo. fol. - - 1484
Nursia (Ben. de) De Sanct. Ed. Pr. 4to. - Petav. 1478
Oratoriæ Artes, 4to. - - Venet. 1482
Omnibonus Vincent, fol. - - Venet. 1475
Omnibonus Vincent. in Lucanum, 4to. - Venet. 1475
Omnibonus (L.) De Laud. Elo. fol. - - Vicent. 1476
Papæ Vocabularium, fol. - - Mediol. 1476
Paradisus Conscientiæ fol. - - - Colon. 1475
Parthenopeus, De Pris. Ed. Pr. fol. - - Tarvisii, 1478
Paulus Burgensis Scrut. Script. fol. - - Mogunt, 1478
Pelagius (A.) Planctus Eccles. Ed. Pr. fol. - - 1474
Perroti Rud. Gram. fol. - - - Petav. 1475
Perroti (N.) Gram. 4to. - - - Tarvisii, 1477
Petrarca (F.) De Contemptu Mundi Liber. Sine Anno. edit. vetus.
Petrarca (F.) Rerum Vulg. fol. - Petav. 1472
Petrarca (F.) Opere. Ed. Pr. - - Mantuæ, 1472
Petrarca, Opere di. fol. - - Venet. Jenson. 1473
Petrarca F. H. Lib. fol. - - Veron. 1476
Petrarca (F.) Le Vite. - - - Florent. 1478
Petrarca (Le Medesime Rime di) fol. - Venet 1478
Philelphi (F.) Satyræ, Ed. Pr. fol. - - Mediol 1476
Philelphi (F.) Orat. 4to. - - Venet. 1491

Library.

Auctores Recent.

Philelphi (M.) Epist. 8vo.	Basil,	1495
Pii II. Hist. Ed Pr. fol.	Venet.	1477
Poggii Facetiæ, Ed. Pr. 4to.	Circa	1470
Poliphilus. Ed. Pr. fol.	Tarvisii,	1467
Politiani (Angeli) Opera, Ed. Pr. fol.	Ald.	1498
Prosperi Tractatus, 4to.	Taurini,	1480
Rabani Mauri. Theol. Ed. Pr. fol.		1476
Regimen Sanct. Salern. 4to	Venet.	1480
Retino (L. De.) Sermon. fol.		1473
Rodericus Zamodusis Speculum Vitæ Humanæ, fol.	Paris.	1475
Rudimentum Noviciorum, 2 vol. fol.	Lubeck,	1475
Sancta Maria (P. de.) Scrut. Ed. Pr. fol.	Romæ,	1470
Sancta Maria (P. de.) Dialogus, Ed. Pr. fol.	Mog.	1478
Sanctius (Rod.) fol.	Rom.	1470
Scala Coeli. fol	Lubeck,	1476
Scotti (Michaelis) Physionomiæ, Liber. Ed. Pr. 4to.		1477
Scanarobus (A.) De Morbo Gall. 4to.	Bonon.	1498
Servitoris Liber. 4to.	Venet.	1471
Serapion (J.) Pract. Dicta. fol.	Venet.	1499
Silvaticus (M.) Med. Pandect. Ed. Pr. fol.	Neapol.	1474
Silvii (A.) Epist. 4to.	Romæ,	1475
Silvius (A.) Rerum, 4to.		1483
Solinus, Ed. Pr. fol.	Venet. Jenson.	1472
Speculum Vitæ Hum. 8vo.		1470
Speculum Conscientiæ, fol.	Bruscell.	1476
Suiseth (Ric. Angli) Calculationes, Ed. Pr. fol.		1498
Supplementum Liber qui dicitur, fol.	Venet.	1475
Sylvius, 8vo.		1475
Sylvius, (Æ.) Pius II. Epist. fol.		1477
Theranis, (J. de) Liber de Consol. 4to.	Colon.	1474
Thesaurus Cornucopiæ, fol.	Ald.	1496
Thomas de Aquino, (St.) opus Inscriptum, Secunda Secundæ, Ed. Pr. fol.	Mogunt,	1467
Thomas de Aquino, (St.) Prima Secundæ, Ed Pr. fol.	Mogunt,	1471
Thomas de Aquino, (St.) Opus Quart. Ed. Pr. fol.		1469
Thomas de Aquino, (St.) Quest. Ed. Pr. fol.	Circa	1470
Thomas de Aquino, (St.) Opera, fol.	Venet.	1478
Tortellius, (J.) Comment. Gram. Ed. Pr. fol.	Romæ,	1471
Tortellius, (J.) Com. fol.	Ven.	1471
Tortellius (Jo.) Aretinus, fol.	Vicent.	1479
Tractatus de Sphæra, 4to.	Venet.	1490
Trapeszantii, (G.) Rhet. Ed. Pr. fol.	Venet.	1470
Turrecremata, (Jo. de) Expos. fol.	Mogunt,	1474
Turrecremata, (J. de) Med. fol.	Mogunt,	1479
Valescus de Thar. 4to.	Lugo,	1490
Valturius, (R.) de Re Mil. fol.	Veronæ,	1472
Valla, (L.) de Ling. Lat. fol.	Venet.	1476
Vallensis, (L.) de Ling. Lat. fol.	Brix.	1475
Varonis de Castella, 4to.	Toledo,	1484
Veragine, (J. de) Legend. fol.		1476
Veragine, (J. de) Sermones, 4to.	Lugd.	1498
Ysaac De Part. 8vo.	Paduæ,	1487
Yspanus, (P.) Summa Exper. fol.	Antw.	1476
Zacharius di Concord. Ed. Pr. fol.		1473
Zochis, (J. de) Opusculum, Ed. Pr. fol.	Patav.	1472

Of the preceding list it may be remarked that it will be found to contain almost every work in Classic and Foreign Literature known to exist, previous

to the sixteenth century. Those that have been omitted from the deficiency of dates, may be considered almost to complete the series. Library.

In this Library also, are the Editiones Principes of nearly all the Classics printed after 1500, viz. Ælian, Æschylus, Euripides, Anacreon, Demosthenes, Epictetus, &c. likewise the ed. opt. of the Elzevirs, Variorum, Delphini, and Baskerville Classics; and the large paper copies of those printed by the Messrs. Foulis of this city. In proportion to the extent of the Library, the number of works of excessive rarity, is unequalled; some indeed are unique. The following are a few examples: Miscell.

St. Joannis Apocalypsis; Typographiæ nascentis specimen.
Vide Palmer's History of Printing.

Terrentianus Maurus de Literis, Syllabis et Metris Horatii, fol. Med. 1497

"This is judged to be the only copy of this edition in England, if not in the whole world. It is now in the Museum of Dr. Hunter. Originally it belonged to Dr. Taylor the editor of Lysias and Demosthenes, who procured it from the Harleian Library for four guineas only. We are told that, during his life, one hundred guineas would not have obtained it." Dibdin's Bibliomania, 2d ed. pp. 520.

Joannes de Tambaco Consolationes Theologiæ, fol. - 1366

This work appears to have been printed in imitation of MS. which may account for the date it bears. The earliest edition noticed by Bibliographers has not the Printer's name or residence. It is supposed to have been published about 1475.

The following are in unequalled fine condition:

Biblia Sacra Polyglotta, Compluti, fol. 6 vols. - 1514-17

Stephani Thesaurus Linguæ Græcæ, cum Glossario Stephani, 5 vol. - - - Paris, 1572

Cæsar, a Clarkio, l. p. fol - - Lon. 1712

Herodotus, Ed. Pr. l. p. fol. - Venet. Aldus. 1502

Books in Vellum.

We shall notice a few only of these sumptuous and splendid performances, so industriously sought after, and so carefully cherished by the Bibliographic Cognoscenti. For the illustrations we are indebted to Mr. Dibdin. Books in Vellum.

Platonis Opera, apud Aldum, 2 vol. fol. - Venet. 1513

"At Dr. Askew's sale a copy on vellum was purchased by the celebrated Dr. Hunter for L.55 : 13. This very copy was originally in the Harleian collection, see vol. i. No. 5404. I have seen it, and both vellum and ink are, as French Bibliographers express it, "*d'une beaute eclatante.*" Three hundred guineas would not procure such another copy. It is indeed exquisitely beautiful."

Intro. to the Classics, 3d. ed. vol. ii. pp. 132.

"The reader can have no idea of the beauty of these vellum leaves. The ink is of the finest lustre, and the whole typographical arrangement may be considered as a masterpiece of printing."

Bibliomania 2d ed. pp. 518

Cicero de Officiis, apud Fust, 4to. - Mogunt. 1466

"In Dr. Hunter's and in the Cracherode collection, there is a copy of the edition of 1466 on vellum. The edition of 1465 (Edit. Prin.) is also in both places. I have never seen a copy of the *first* edition upon *vellum*, or of the *second* upon *paper*."

Intro. to the Classics, 3d ed. vol. i. pp. 280.

Tewrdranckhs Poema Germanica, cum fig. Alb. Dureri, fol. Norimb. 1517

In Erotica Historia, Sponsalia Imp. Maximiliani cum Triaria Burgundica complectuntur. Nonnulli hujus Authorem ipsum Maxim. crediderunt. Vide MS. note on the Book.

"This is a book of uncommon rarity. Kœllerus, who purchased a copy

Library.

Books in Vellum.

on vellum for two hundred crowns, has given a particularly tempting description of it. The wood cuts 118 in number justify every thing said in commendation of them by Papillon and Heinecker. It has been a moot point with Bibliographers whether the extraordinary type of this book be *wood* and cut in solid blocks, or moveable types of *metal*." Bibliomania, 2d ed. pp. 519

Anthologia Græca, Edit. Prin. fol. - - - - 1494
Purchased for L.28 : 17 at the sale of Dr. Askew's books.

Augustinus de Vita Christi, 4to. - Mogunt. 1470
Remarkable for the purity of the vellum.

M. Von Praet, Director of the Imperial Library at Paris is soon to gratify the curious in vellum books, by publishing a description of all that are known. Those in the Hunterian Museum will undoubtedly be described with the care such noble works deserve.

English Press.

English Press.

The following list, although of a small part only, will point out how rich the collection is, in books of early English Printing. Information regarding these rare and curious works, may be obtained, by consulting the volumes of British typographical antiquities by Oldys, Ames, and Herbert, or the accurate amended edition of the whole, now publishing by Mr. Dibdin

The Lyves of Holy Fathers, 4to - - - Caxton, 1475
The Chronycles of Englande, fol. - - - Caxton, 1480
The Lyfe of Christe, in seven parts, fol. Caxton.
The Myrrour of the World, fol. - - Caxton, 1480
The Four Last Things, by Erle Ryviers, 4to. - Caxton, 1480
Godofroye of Boloyne, 4to. - - - Caxton, 1480
Polychronicon of Ranulph Higden, translated, fol. Caxton, 1482
The Golden Legend, fol. - - - - Caxton, 1483
The Chronycles of Englande, fol. - - - St. Albans, 1483
The Proffytable Boke for Mannes Soule called Cathon, 4to. Westminster, 1483
Translation of Virgil, fol. - - - Caxton, 1490
Dives and Pauper, fol. - - - Pynson, 1493
Hylton's Ladder of Perfection, fol. - - Caxton, 1481
Promptiorum Puerorum, 4to. - Pynson, 1497
Chaucer's Canterbury Tales, Orig. Ed fol. Caxton.
Chaucer's Booke of Games, Orig. Ed. fol. - Caxton.
Treatise to learn well to Die, 8vo. - - Pynson.
The Golden Legend, fol. - - - Notary, 1503
The Ordynary of Chrysten Men, fol. Wynkyn de Worde, 1506
Boke of Games, fol. - - Wynkyn de Worde.
Caxton's Description of Britain, fol. - Wynkyn de Worde, 1528
The Miracles of oure Lady, - Wynkyn de Worde.
Lydgate's Warres of Troye, fol. - - Pynson, 1513
Exornatorium Curatorum, 4to. - Wynkyn de Worde.
Myrrour for Magistrates, - - Wynkyn de Worde.
St. Augustine (The Rules of) Lat. and Eng. 8vo. Wynkyn de Worde.
The Shepheards Kalendar, - Wynkyn de Worde.
Bonaventure, - - Wynkyn de Worde, 1525
Sulpilius, 4to. - - Wynkyn de Worde.
The Golden Boke of M. Aurelius, 4to. Wynkyn de Worde, 1525
The Kings of Poleyne, 8vo. - Wynkyn de Worde.
Polychronicon, fol. - - Wynkyn de Worde, 1527

Among other important and rare works, printed with Black Letter, are the best editions of the Chronicles of Hollingshed, Fabian, Sleidane, &c.—Hackluyt's Voyages—Purchas his Pilgrimage, 5 vol.—The Expedition into Scotland, 1548—Syr Thomas More's Supplicacion of Soules, 1530—Syr Thomas Elliot's Works—Ascham's Scholemaster, 1571.

Library. English, Press.

POETRY AND THE DRAMA.—Shakespeare's Works, 1st Edit. fol. 1623—Spencer's Fairie Queen, Orig. Ed. fol.—Bochas Tragedies—Lingua, or the Combat of the Tongue, &c. &c.

BOOKS OF PRINTS.—Hogarth's Works, a very perfect collected copy, original Impressions—Houbraken and Vertue's Heads, large paper—Cantab. Illustrata—Dart's Westminster and Canterbury, &c. &c.

Hearne's Publications.—The Genealogical account of the House of Yvery, and others on similar subjects; known to every collector, by their excessive rarity. Several very rare and curious private works are deposited here that were not printed for sale—The early Tracts and Historical Documents and Records are of great value and curiosity.

Scottish Press.

Scottish Press.

Dr. Hunter not only procured the splendid, and for accuracy unrivalled books, printed in Glasgow by the Foulis, but also made considerable exertion, and was eminently successful in procuring specimens of early Scotch printing, thereby enriching the collection with many matchless copies of exceeding scarce books of this class. Amongst them are

Syr D. Lyndsay's Works, orig. edit.—Scots Acts b. l. Lepreiuk—Discipline of the Kirke—Knox's Exposition of the Psalms—Patten's Expedition—Terrentianus CIↃ IↃ.XXCIII. ex Officina Sanctandreana—Watson's History of Printing—Anderson's Numismat. Scotica, orig. ed. &c. &c. &c.

Sallustius, 12mo. Stereotype edit. by Ged, Edin. 1744

Dr. Pat. Cumin of the College of Glasgow, presented to the Museum this Book, and one of the plates from which it was printed. It completely disproves the recent claim of the French to the original discovery of Stereotype Printing.

The greatest attention and diligence appears to have been exerted to procure the most early and choice copies of every distinguished work in Medicine, Natural History, Natural Philosophy, and the collateral Sciences, many of which are most splendidly decorated; those of an early date, have the curious descriptive wooden cuts.

Manuscripts.

Manuscripts.

These are preserved in an apartment on the North Side of the Library, exceeding six hundred volumes in almost every language; many are written on vellum, beautifully enriched with gold ornaments, and otherwise splendidly illuminated. Several are in gorgeous antique bindings. Many superb Missals, of exquisite and unrivalled beauty.—Very valuable Oriental Manuscripts, both ancient and modern.—Classic authors in Manuscript, before the invention of Printing.—Many authentic and original historical documents and Collectanea of Miscellaneous Subjects.—Many of old English and Scottish Poetry.

To enumerate these rarities in this Companion, would be impossible, we shall therefore merely notice the following, some of which are exhibited.

Le Grant, Vita Christi, translatè en François, vell. 4 tom. fol.

"Cet ouvrage Latin de Ludolphe Chartreux MS. sur velin en lettres Gothiques avec Minatures, 4 tom. en fol. relies dans leur ancienne reliure en bois et couverts de valours rouge." De Bure, Bib. Instructif, vol. 5, pp. 39. This work belonged to the superb Library of Mr. Gaignat. See Cat. No. 126

L'Office de la Vierge Marie, a Matines, ave Maria, vell. 12mo.

It is adorned with highly finished miniature paintings.

Apostolorum et aliorum Quædam, vell. fol.

This is supposed to have been executed during the eighth century, and it is certainly one of the most perfect and best preserved manuscripts of that period.

Library.

Manuscripts.

Apostoli Manuscriptum XI. aut veterioris videtur seculi, vell. fol.
Curiously written on vellum with many illuminated miniatures.
Apocalypse, Trad. Françoise, vell. fol.
The borders of it are most exquisitely decorated with miniatures.
Breviary, vell. fol.
It has the date of 1404—Most splendidly illuminated.
The Book of Esther, on a roll of vellum.
Elegantly written in the Hebrew Language. The margins are ornamented with Birds and Flowers, done in Indian Ink.
Cartularium Prioratus Sanctæ Trin. infra Aldgate, Lond.
Letters to Lord Clarendon, by the most celebrated Characters of his time.
A large volume of original Proclamations by Queen Elizabeth.
The proclamations are written very fairly, and all signed by her Majesty's own hand, many of them are countersigned by her Lord Chancellor, and other great Officers of State. They are of different years of her reign, and relate to Spanish, Irish, and Scotch affairs, War, Treaties, and Peace, Traytors, Pardons, and Commissions, Coin, Mint, Wines, Wool, and Woollen Cloth, &c.
The department of MSS. has, since its arrival at Glasgow, been augmented by purchase and donation.

The preceding concise remarks, on a small part of the riches preserved in this literary treasure, will be sufficient to shew how necessarily imperfect such a description must be; and how very desirable an extended Catalogue Raisoneé of the whole, would be to the literary world. Such a catalogue of this collection, is truly a desideratum in Bibliography. The unknown volumes it would discover, might afford matter of the first importance.

Gallery.

CONCHOLOGICAL DIVISION.

Conchol. Division.

SHELLS.

Of the immense assemblage of these beautiful works displayed in the Glass Cases we can only specify a few of the most rare and striking specimens. The name of the Genus will be found at the beginning of each division, and specific names are attached to the individual specimens. It may be necessary also to observe, that though Linné had studied the subject, and methodized the materials of it, he has not described one-fourth part of the objects contained here. To remedy this deficiency, we shall have recourse in many instances, to the synonymes of the late Dr. Solander, which will be designated by the letter *S*.

Although the Linnæan arrangement is principally followed, we are under the necessity of deviating in one or two instances, from the very great dissimilitude which appear in two of Linné's Genera. In the Lepas, we have separated those shells which are sessile, and placed them under the generic term of Balanus; those with a pedunculated stem or stalk are retained under the original title. In the Genus Ostrea, the shells of the aurited species are placed under the generic name Pecten, leaving the Ostrea distinct. To these have been added a few species which Linné had classed with the Mytilus or Muscles, and as these new divisions are kept in close arrangement, little or no inconvenience will be noticed.

In the Genus Mya and Mactra many shells are placed by Linné which strictly belong to neither; the Genus Teredo he has placed among the Multivalves, instead of the Univalves; but not approving of a complete revolution in a system which is at once simple, perspicuous, and comprehensive, we shall, for the present, content ourselves with the trifling deviations already pointed out, and which were considered to be absolutely necessary.

MULTIVALVE SHELLS.

Genus, *Chiton*—Olivaceus, Olive-Clouded, from West Indies—Cinereus, Gray-Clouded, West Indies—Dædaleus, S. West Indies—Lacteus, Milky, South Seas, rare.

Genus *Lepas*.—Anatifera, Duck Barnacle, Atlantic Ocean, (see page 30 for particular description)—Anserifera, Goose Barnacle, Ditto.

Genus *Balanus*.—Testudinaria, S. Tortoise, Atlantic Ocean.—Diadema, S. Coronated, Ditto—Mitella, S. Ditto.

The three preceding species inhabit the skin on the back of the Whale, deeply embedded in the fat, and are said to be very troublesome to that fish; they are known to the Greenland fishermen by the name of the Whale Louse.

Tintinabulum, S. Bell, Amboyna—Tintinabulum, Var. highly tinged with red, supposed from the animal of the Red Coral to which it was attached. It is the identical specimen described by Ellis in Phil. Trans. vol. 50, tab. 34. fig. 10—Osculum, S. Small-mouthed, Portugal.

Genus *Pholas*.—Striatus, Striated, East Indies—Crispatus, Curled, Normandy—Dactylus, Finger, Malta, &c.—Costatus, Ridged, North America.

BIVALVE SHELLS.

Genus *Mya*.—Margaritifera, Pearl Mya, France—Arenaria, Sand—and Truncata, Truncated, English Coast—Pictorum, Painters, Holland.

Genus *Solen*.—Vagina, Sheath, East Indies—Legumen, Peascod, Mediterranean—Strigillatus, Currycomb, Ditto.—Radiatus, Radiated, China.

Genus *Tellina*.—Remie, Platter, West Indies—Rigida Thread Ball, Normandy—Scobinata, Rasp, China—Cremoris, S. Cream Skimmer, very rare, unknown—Rostrata, Beaked, Tranquebar—Spengleri, Toothed, Coromandel, scarce—Foliacea, Crested or Golden, Amboyna—Radiata, Tulip, West Indies, with varieties—Sanguinea, S. Red, Ditto.

Genus *Cardium*.—Protrusum, S. Jutting or Yellow Venus Heart, Tranquebar—Impressum, S. Bent or Pink Venus Heart, Do.—Cardissa, Scolloped-Edged Venus Heart, China—Retusum, Hollow-Hinged, China—Hemicardium, Half-Hearted or Tuberculated, Do. rare—Fragum, Knitted, Do—Unedo, Strawberry, Do.—Janus, Janus, Friendly Isles, very rare—Dentex, S. Great Teeth or Comb, Guinea, scarce—Arundinosum, Bundle of Reeds, South Sea—Robusticum, Great Florida Cockle, Florida—Costatum, Hollow-Ridged, China, rare—Crispatum, S. Curled Ridges, China, rare—Isocardia, Rasp, West Indies.

Genus *Mactra*.—Violacea, S. Violet Tray, Tranquebar—Spengleri, Spengler Mactra or Hollow-Hinge, Cape of Good Hope.

Genus *Donax*.—Cuneata, Rayed, Tranquebar—Scortum, Spined, Do.—Grandis, S. Great, Cape of Good Hope.

Genus *Venus*.—Castrensis, Camp, China—Meroe, Waved, China—Flammeus, S. Flame, China—Ornata, S. Adorned, Tranquebar—Dione, Thorny, West Indies, extremely scarce when perfect—Scripta, Pencilled, Tranquebar—Fimbriata, Bread Basket, China—Punctata, S. Crimson-Zoned, New South Wales—Chione, Smooth, Mediterranean—Mercenaria, Wampum, North America. Of this species the Indians of North America form their purple and white beads, with which their Wampum or Treaty Belts are ornamented—Nimbosus, S. Shower, Florida, scarce—Literata, Arabian Letters, Molucca Isles.

The Genus Spondylus, or Hinged Oyster, is a numerous, as well as a beautiful family. Linné has given very few specific names to this genus, but arranged them generally under the term Spondylus Gæderopus; all we can add, is to furnish a few specific names, alluding either to their formation or colour, in which we shall follow as near as possible, the Nomenclature of the late Dr. Solander, and mark them as varieties.

Gallery. Conchol. Division. Bivalves.

Genus *Spondylus*.—Gæderopus. A very elegant and interesting Article, in which are seen several specimens of various species naturally affixed to each other, with a large and fine Serpula Cœlata entwined among the Spines, &c. &c.—Ditto in many respects, having also a fine *Arca Noæ*, or Noah's Ark Shell affixed naturally.—Armatus, Armed, St. Domingo, many specimens with Madrepores, Serpula, &c adhering—Croceus, Saffron-coloured, Martinique—Pica, Pied, East Indies—Rufus, Red and Yellow, East Indies—Purpureus, Purple, Mediterranean—Palmatus, Broad-Spined, China—Hystrix, Porcupine, Do.

Genus *Chama*.—Hippopus, Bear's Paw, China—Multifolia, Many Furbelowed, China—Gigas, Giant or Furbellowed. This is the young of the large Shells described in page (44)—Cor Heart or Fool's Cap, Mediterranean—Lazarus, Tattered or Lazarus Beard, Molucca Isles; a remarkable fine specimen adhering naturally to a fragment of sand-stone—Arcinella, Thorny Heart, Ditto—Many specimens of the red variety.

Genus *Arca*.—Senilis, Thick, Guinea.—Nodulosa, Knobbed, China.—Noæ, Noah's Ark, West Indies—Tortuosa, Twisted, Nicobar Isles, rare—Glycemeris, Undulated, Mediterranean—Deusta, S. Dark-coloured, Do.—Legumen, S. Peascod, country unknown. Of this very rare shell only one other specimen is in this Country, which originally belonged to the late Duchess of Portland, at whose sale it was purchased by the late Dr. Fordyce, for L.4 : 15 : 0, and at the sale of the Doctor's Cabinet a few years since, it sold above L.5.

Genus *Ostrea*.—Edulis, Common eatable Oyster of large size, various coasts—Elongata, Long Purple Spot, North America—Purpurea, S. Var Horn of Plenty, or Cornucopia, Arabia—Crista Galli, S. (*Mytillus Christa Galli*, Linn.) Friendly Isles, several varieties—Vulsella, S. (*Mya Vulsella*, Linn) the Sole, Arabia—Ditto in their native state enveloped in a Sponge—Ostrea Malleus, Black Hammer Oyster, South Seas, rare—Malleus, Var. White Hammer Oyster, very rare. This specimen was brought home by Captain Cook from the Coral Reef at Endeavour River, and is very rare. Twelve Guineas have been given for a fine specimen—Hyotis, S. (*Mytilus Hyotis*, Linn.) Great, or Giant Oyster, Friendly Islands, rare.

Genus *Anomia*.—Pectiniformis, S. Scallop-like, Mediterranean—Terebratula, Pigeon's Egg, Do.—Truncata, Short-Beaked, Do.—Sanguinea, S. Blood Red, New Zealand, very rare—Electrica, Many-coloured, Normandy and English Coasts—Placenta, Glassy, or Window Shell, China. With the thin Shells of this species the Chinese form the windows of their Summer-Houses, for which purpose they are well adapted, particularly in a warm climate, as they exclude the rays of the Sun, and yet admit a sufficiency of light.—Ephippium, Polish Saddle, Tranquebar.

Genus *Mytilus*.— Margaritifera, true Mother of Pearl Shell, from Coast of Coromandel, Ceylon, &c. In this suite may be seen specimens with pearls and pearly knobs adhering, also a small box with two handsome pearls, one of which is pink, very rare—Margaritifera Var. Black Mother of Pearl Shell, Otaheite, rare—Fimbriata, S. Fringed, West Indies—Hirundo, Swallow-tailed, Amboyna. In this suite are many rare and interesting varieties.—Edulis Common Muscle, English Coast, polished—Castanea, Chesnut, country not ascertained; only one other specimen is known in this kingdom, late the Duchess of Portland's, now in the Cabinet of J. Woodd, Esq. Old Burlington-Street, London—Virides, S. (*Mytillus Ungulatus*, Linn.) Green or Opal Muscle, China—Perna, S. Ham, Portugal, polished—Modiolus, Rustic or Lilach, Norway, polished—Ornatus, Pencilled, China—Lithophagus, Stone-Piercer, Mediterranean. The animals of this species scoop out holes in stones just big enough to contain the shell, in which they reside; receiving their nourishment from that part of the cavity first begun, which is on the outside of the stone.

Genus *Pinna*.—Nigricans, S. Black, Otaheite, a very rare species—Nobilis

Noble, Mediterranean. From the silky byssus of this shell, is manufactured at Palermo, and other Towns on the Coast, Stockings, Gloves, Garters, &c.—Rigida, S. Rough, Guinea—Saccata, Pocket, Pulo Condore, very scarce—Ingens, Great, English and Scotch Coast, scarce.

UNIVALVE SHELLS.

Genus *Argonauta*.—The species of the genus Argonauta are esteemed as some of the most curious of the Testacea, whether we regard the manners of the animals which inhabit them, or the delicacy and elegant form of their shells. They swim on the surface of the waves, spreading a thin film for a sail, and put forth arms, three on each side, which serve for oars, in which manner they glide along, but sink instantaneously if but a shadow pass over them. The first idea of the art of Navigation is supposed to have been taken from these little Sailors; and the species Argonauta Argo, is certainly the Nautilus of the ancients, and the one that Pope in his Essay on Man alludes to in these well known lines.

" Learn of the little Nautilus to sail,
" Spread the thin oar, and catch the driving gale."

The shells of this genus are not chambered as the Nautili, nor are they pearly within.

Argo, Corrugated or Wrinkled, Mediterranean and East Indies—Hians, S. Open, China— Navicula, S. Gondola, China—Nodosa, S. Tuberculated or Studded, Cape of Good Hope.

There is but one other species of Argonauta belonging to this genus, viz. Vitrea, S. Glassy, or Lantern Nautilus. This is so excessively rare that only three specimens are at present known in any Cabinets in Europe, one of which was in the possession of the late celebrated Mr. Lyonet, of the Hague, who refused one hundred guineas for it; the second in the Cabinet of the late Mons. Calonne, ci-devant Prime Minister of Louis 16th; and the third in the National Museum at Paris, presentd by Napoleon, to whom it was given by Mons. Peron, who met with it during the research after the unfortunate La Perouse. N. B. Mons. Calonne's specimen is now in the superb Cabinet of Mr. Jennings of Chelsea, who purchased it for L30.

Genus *Nautilus*.—Pompilius, Great-Chambered Sailor, China and other parts of Asia—Spirula, Scroll, West Indies—Umbilicatus, Umbilicated or Navel-like. This very rare shell has unfortunately been divested of its outer coat for the purpose of being engraved on by a Dutch or German Artist.

The shells of this genus are remarkable for having a number of cells or chambers, as is exemplified by the dissected specimens in this Case. The last, or biggest of these cells is that occupied by the animal when in a living state, the other chambers are not visible till dissection, or the outer shell is taken off. These cells communicate with each other by a siphunculus, or pipe, which is not continued throughout, but leads only from one cell to another. In Naut. Spirula, the siphunculus, or pipe, is testaceous, and placed on the inner side; but in the Nautilus Pompilius, &c. it is partly shelly, and partly a film, and placed in the centre of the partition which divides one shell from another.

Various have been the conjectures respecting the use of those cells unoccupied by the animal; but the most prevailing opinion is, that they are for the purpose of buoying the shell to the surface, or sinking it at the pleasure of the animal, by the introduction or expulsion of either air or water through the membranous tube. This was known so long ago as the time of Hooke, who believed it to be a tube dilatable or compressible at pleasure; and that like the air bladders of fishes, it served by its expansion or contraction, to render the animal buoyant or not.

Parkinson in his third vol. of Organic Remains of the Antediluvian World has fully demonstrated, by his investigation of Fossil specimens of the Nautili

Gallery. Conchol. Division. Univalves.

in his possession, not only the existence of a continued siphunculus, extending through every chamber of the shell, but that it is sometimes to be seen so much larger than the shelly part of the tube with which it is joined, as gives reason for supposing it to have been capable of a considerable degree of dilatation.

It may appear strange to most of our readers that it should be necessary to have recourse to shells of the antediluvian world, when recent shells of the Nautili are so numerous. The truth is, in the recent shells, the membranous part of the siphunculus is seldom if ever found, it being either removed by decay, or by the process of slitting or rubbing down the shell. The writer has rubbed down with the greatest care at different times, above a dozen Nautili, but without making the discovery; and the Nautili being as supposed pelagian, or living out at sea, their shells without the animal are only met with driven by the waves on the shore. We do not recollect any author but Rhumphius, in his history of the shells of Amboyna, who pretends to have seen or examined the animal, and even his representation is doubtful, as it was taken from a dead animal, much injured and unconnected with the shell. However there is some probability this might have belonged to a Nautilus, as it shews the appendage, a round membranous process, which is seen in the posterior part by which it was connected with the siphunculus of the shell; but it also seems to bear that figure which authorizes the supposition, that part of the shell has been let into the body of the animal.

La Marck observes, that this partial envelopement of the shell by the animal is confirmed by the blanched appearance which extends some little distance from the edge of the mouth of the shell of N. Pompilius, and which differs so widely from that which is yielded by the other external part of the shell, which is beautifully marked by transverse orange-coloured stripes.

Mons. Peron was so fortunate as to obtain the animal of Naut. Spirula in connection with its shell, and brought it to France from New Holland in that state. This animal which appeared to be analogous with the Sepia, had the shell not only attached to, but so let into its posterior extremity, as to leave a part of it only in view.

The near agreement of the internal structure of the shell of Naut. Pompilius with that of Naut. Spirula, and the circumstance of the Argonauta being inhabited by a Molusca of this class, leave but little doubt that all these shells have been the solid appendages of similar animals; and that the animal of Naut. Pompilius and its congenors, reside in the last formed chamber of the shell, and is of the family Cephalopodes.

One other singular character we cannot help noticing ere we dismiss this article, which is the closed cavities or chambers of the shell. With these the animal preserves no communication, except for the passage of the siphunculus, by closing each chamber, and completely excluding himself from them; thus as he grows larger, he forms himself new habitations. Hence it appears highly probable that the only use of the vacuities formed by these numerous chambers, is to counteract the weight of the increasing animal, and of the thick shell; and thereby render the whole as nearly the weight of the water as possible, so that the difference arising by the action of the siphuncular membrane being contracted or dilated, may occasion the whole to swim or sink.

From what source the gaseous matter (as it most probably is,) is derived with which the siphuncular tube is filled, and in what manner the animal effected those modifications of the tube and its contained air, on which the variation of its buoyancy depended, are subjects of inquiry still demanding the assiduous attention of the Naturalist.

Genus *Conus*.—This is by far the most numerous as well as the most beauful family of the division of shells, consisting of many hundred species, some of which are of the greatest rarity and price. Above one hundred guineas have been offered and refused for one shell alone, belonging to this genus.

This was the celebrated *Cedo Nulli Pretiosissimus*, Linn. late in the possession of Mr. Lyonet of the Hague. The late Duchess of Portland sent an agent on purpose to purchase this rarity, and offered the above sum; but Mr. Lyonet valued it at L.300, and would not part with it for a less sum. Many shells in this genus now in the Museum are valued from five to ten guineas each specimen.

Conus Ammiralis, High Admiral, Amboyna—This is a rare and beautiful shell, and much sought after by collectors. Architalassus, S. Granulated High Admiral, a variety of the preceding species, also from Amboyna, rare—Phœnicopterus, S. Flamingo, China, extremely scarce—Phrygius, S. Lace Work, Nicobar Isles, ditto—Magus, Magician, Nicobar Isles, ditto—Nobilis, Yellow Tiger, China, scarce—Jaspideus, Spanish Admiral or Jasper, Maldivian Isles, rare—Proteus, S. West India Spectre, a large and beautiful suite—Literatus, Alphabet, Madagascar, &c.—Leopardalis, S. var. of the preceding, China, scarce—Genuanus, Guinea Admiral, or Butterfly's Wing, Guinea, rare—Grandis, Great, Guinea; this is the largest species of the genus—Virgo, Wax Taper, a suite exhibiting the shell in its native state also with the coats taken off till it shews the beautiful purple tip, from Madagascar—Figulinus, Oak Wood or Threaded, China—Miles, Aaron's Girdle, China—Quercinus, S. Box Wood, from Hayman, scarce—Tessulatus, S. Mosaic Pavement, Madagascar—Betulinus, Butter Firkin, China—Arenatus, S. Sandy, or Flea Spot, Madagascar, a fine suite—Imperialis, S. Imperial Crown, China, &c.—Araneosus, S. Spider's Web, Tranquebar, very scarce—Araneosus, S. a var. Spider's Web, ditto—Marmoreus, Black Tiger, Asia, &c.; near it a fine yellow spotted variety, very rare—Mappa, S. or False Cedo Nulli, rare; this shell is nearly allied to the Cedo Nulli, as noticed at the beginning of this genus.—Stercus Muscarum, Fly Spot, China—Striatus, Striated or Great Spectre, Madagascar and China—Textili, Gold Brocade, China—Gloria Maris, Glory of the Sea, native place unknown, but is presumed to be either Japan, New Guinea, or some less frequented country, very rare—St. Oma, or St Thomas's Cone shell, from St. Oma's Island—Spectrum, Spectre or Fairy, China—Bullatus, Swelled or Orange Tulip, ditto—Geographicus, Silk Brocade, Madagascar—Tulipa, Purple Tulip, ditto.

N. B. The four last species are varieties of the genus, with a patulus or wide mouth.

Genus *Cypræa*.—This is also a numerous and beautiful family containing shells of the greatest rarity.

Cypræa Pediculus, true Louse Cowry of Linn. West Indies—Moneta, Money Cowry, or Truss'd Fowl, Maldivian Isles, &c. This species pass as money in the East Indies, Africa and America—Erosa, Gnawed or Two Spot, Madagascar—Stercoraria, Mole-hill, Guinea—Mappa, Map, Amboyna—Tigrina, Leopard or Tiger Cowry, Madagascar, Asia, &c.—Argus Occidentalis, Cypræa Cervus, Occidental or West India Argus. Linné from the various stages of growth of this shell, has formed several species; as in the first stage, or without the lip, he makes it a Bulla, Bulla Cypræa; second stage Cypræa Zebra; third stage or perfect state, Cyp. Xanthema, and Cyp. Cervus—Argus Orientalis, Argus, Amboyna, scarce—Testudinaria, Mole, Ceylon, scarce—Aurora, Morning Dawn or Orange Cowry, country not perfectly ascertained, probably from the Fidgee Islands. They were met with by Captain Cooke and other Voyagers at the Friendly Isles, where they are much esteemed by the natives, who wear them as ornaments round their necks. One of these with a hole on the side has been used as such, the other is perfect, and rich in colour, and is valued from ten to fifteen guineas.

Genus *Bulla*.—Lignaria, Wood-like, English Coast. The animal of this shell is furnished with a curious bony substance within the stomach, which is supposed to be of a similar use to that of the gizzard in birds, for masticating or grinding its food, Vide Linnean Trans. vol. 2nd—Ampulla, Lapwing's Egg East Indies—Ovum, Poach'd Egg, China and other parts of Asia—Volva, Wo-

Gallery. Conchol. Division. Univalves.

ver's Shuttle, Japan, extremely scarce—Gibbosa, Gibbous, or the Camel, West Indies--Bulla Imperialis, S. Blush or Pink Mouth. This delicate species is worn as an ornament by the natives of the Friendly Islands, and is very rare—Dubia, S. Doubtful, Amboyna, excessive scarce—Physis, Hair-Streaked, China, rare—Zonata, Zoned, Tranquebar, scarce--Naucum, Pigeon's Egg, China--Rheda, S. Venus's Chariot This is rather a doubtful species, and supposed not to be a shell, but the habitation of a species of Clio, they are natives of the Mediterranean Seas—Virginea, Ribband or Prince of Orange Flag, Surinam. A beautiful suite of these shells, comprising most of the varieties—Achatina, Zebra, Cape of Good Hope, with the Narrow Striped variety—Eubrescens, S. Blush or Pink Mouth, Guinea, rare.

It is to be regretted that Linné had not examined with greater attention the four last species, as they evidently belong to a genus totally different from this wherein they are placed; several other species in the other genus's are in the same situation, and ought to be removed, but having already committed innovations on his system, we are fearful of proceeding farther than what is absolutely necessary. The fact is, when Linné began his System of Nature, he did not consider Conchology as worthy his notice, (shells being only the covering or exuviæ of animals;) till he was struck with their extreme beauty and variety, on seeing and examining the late Duchess of Portland's collection, when he immediately determined on an arrangement. This he executed in great haste, and consequently it has many errors. Had he lived a few years longer, no doubt he would have improved this division of his system.

Genus *Voluta*.—Pinguis, S. Fat or Quaker, Brazil—Cymbium, Clouded Melon, Guinea, rare—Scapha, Boat or Gondola, Ditto—Cithara, S. Painted, New Guinea, very rare—Amphora, S. Clouded Persian Crown, Moluccas—Japonicus, S. Japanese Crown, Japan, scarce—Æthiopica, Æthiopian Crown, Moluccas, scarce—Producta, Long-Spired, Falkland Islands; the Voluta Ancilla, Solander, very rare—Nobilis, Noble Volute, China, very rare—Vespertilio, Bat. China—Imperialis, Imperial Volute, Phillipine Islands, extremely scarce. This large and magnificent specimen is valued at Thirty Guineas—Virescens, Gray Music, Guinea, very rare—Ebrœa, Wood-Veined Ceylon—Pacifica, Pacific Ocean Volute, New South Wales, very rare. Only three other specimens known in this country, it is valued at Ten pounds—Musica, Music Shell, from the French Islands in West Indies. It takes its name from the supposed resemblance of the Lines used in Music being marked on it--Morio, the Moor, West Indies—Pertusa, S. Clouded, Friendly Islands—Mitra Episcopalis, S. Bishop's Mitre, Madagascar, a variety—Caffra, Hottentot, China—Cribrum, S. Orange-Stainer, China—Thiara, S. Abbot's Mitre, Madagascar—Mitra, var. Papalis, Papal Crown, Amboyna—Turbinellus, the Devil Shell, China—Ceramica, Caltrops or Long-Spired Devil, China—Ponderosa, Heavy or Turnip Shell, Straits of Malacca—Pyrum, Long-Beaked, Tranquebar or Spotted Turnip—Sanguisuga, Blood-Spotted, Amboyna—Vexillum, Orange Flag, Haynam, rare—Tradescantia, S. Sir John Tradescant's Volute, unknown, Unique—Auris Midæ, Midas's Ear, Malacca, rare—Auris Judæ, Jew's Ear, Malacca, rare—Fluctuata, S. Striped or Waved, South Seas, rare—Porphyria, Panama Shell or Camp Olive, Bay of Panama—Scripta, Lettered, China,--Ispidula, Long-Spired, Guinea---Protea, S. Proteus, China; a suite of various colours, as orange, dark brown, grey, waved with dark brown and jet black.

Genus *Buccinum*.—Mercatoria, Sitting Pigeon, West Indies—Monile, S. Necklace, East Indies—Glabratum, Ivory or Butter Buc. South Seas—Persicum, Necklace, Ditto—Nigricum, S. Black, South Seas—Patulum, Open or Wide Mouth, West Indies—Monodon, S. Unicorn, Falkland Islands—Ligatum, Waggon Road, New South Wales—Gelidum S. Icy or White Mulberry, Tranquebar—Fimbriatum, var. α. S. Yellow Seal's Paw, China, rare—Fimbriatum, var. β. S. Brown Ditto, S. Sea very rare--Maculatum, Trajan's Column Madagascar—Duplicatum, Double-Grooved Needle, Haynam, rare—

Subulatum, Leopard, China--Scintillans, S. South Sea--Cornutum, Horned or Knit, China--Americana, American Flag, S. Seas, very rare. Gallery.

Genus *Strombus*.--Chiragra, Crab. China--Aurisiacus, S. Orange Mouth Spider, Amboyna, rare--Lambis, Spider, Madagascar--Scorpious, Scorpion, Amboyna--Millepeda, Many-Clawed, Ceylon--Diabolus, S. Devil's Claw, Madagascar; a fine suite in different stages of growth--Truncatus, S. Great Flat Spired, China, in various stages of growth--Violaceous, S. in a young state, Violet Mouth, New Guinea, very rare--Luhuanus, Scarlet Mouth, China--Epidromus, Main-sail, China--Exustus, S. Burnt Mouth, Haynam--Gigas or Lucifer, Great Red Mouth Conch, West Indies--Pugilis, S. Prize-Fighter's Fist, Isle of Providence--Canarium, Partridge, China--Fusus, Long-Beaked, Japan, exceeding scarce, and a specimen in a young state---Fusus, Bellied, Arabia Felix Conchol. Division. Univalves.

Genus *Murex*.---Murex Tritonis, Nereid's Trumpet, West Indies; a fine suite---Murex Femorale, Pig's Snout, China---Murex Angulatum, S. M. Femorale, Linn. Angulated. The Gadrooned edge which Silversmiths generally put on plates, dishes, and other vessels, was taken from the finely wrought margin on the mouth of this species---Colus, Crane, Ceylon---Trapezium, Persian Robe, China---Ramosus, Branched, Madagascar---Haustellum Woodcock, China---Pectinatum, var. Venus's Comb or Double Thorny Woodcock, Haynam, rare---Cornutum, var. Great Thorny Woodcock, Arabia Felix---Saxatilis, Curled or Endive, Phillipine Islands, rare---Famelicus, S. Skeleton, China, very rare---Famelicus var. the White Skeleton. South Sea, very rare---Brandaris, Thorny Snipe's Head, Mediterranean---Cornutus, Horned Snipe, Guinea---Aluco, S. Hercules Club, Madagascar---Paludosa, S. Swamp Club, China---Melongena, Spiked, West Indies.

Genus *Trochus*.---Telescopium, Telescope, Tranquebar. Several specimens dissected, to shew the internal structure---Perspectivus, Perspective or Stair-Case, China, a fine specimen---Atramentarium, Inkhorn, Arabia Felix---Tigrinus, S. Tiger, New Zealand, extremely scarce---Striatulus, Red Tip, Mediterranean--Maculatus, several varieties from China---Tectus, S. Chinese Roof, All Saints, rare---Tuber, Knobbed or Turban, West Indies---Solaris, Golden Sun, West Indies---Onustus, the Carrier. Various specimens from the West Indies, one laden with Shells, Ditto with Stones, Ditto pieces of Coral, &c. The faculty that the animals of this Genus have of affixing Shells, Stones, and other bodies which come in their way, is very curious—Imperialis, S. Imperial Sun, Dusky Bay, New Zealand. A very rare and interesting shell, brought home by Captain Cooke.

Genus *Turbo*.---Delphinus, Dolphin, China---Sarmaticus, Pomegranate, False Bay, Cape of Good Hope---Undulatus, Waved Emerald, Van Diemen's Land, very scarce---Argyrostomus, Silver Mouth, China---Chrysostomus, Chinese or Orange Gold Mouth, Friendly Isles---Pica, Magpie, West Indies; some of the specimens are partially uncoated, and polished---Calcar, Spur, China---Delphinus Minor, Lesser or Pink Dolphin, Tranquebar, scarce—Smaragdinus, Emerald, New Zealand; several specimens uncoated and partially so---Granosus, Granulated, Reefs on the Coast of New Zealand, rare---Petholatus, Ribband, China, several fine varieties in colour---Carinata, S. Keeled, Friendly Isles, very rare---Duplicatus, Press Screw, East Indies---Scalaris, Great or True Wentletrap, Japan, very rare. This species undoubtedly belongs to the family of Serpula, from its volutions being totally unconnected with the Columella, or Pillar Column.

Genus *Helix*.---Helix Hæmestoma, Red Lips or Brunette, East Indies, very rare.---Alvearis, Bee Hive, Jamaica---Contraria, Contrary or Reverse Helix, China. This species is remarkable for turning the contrary way, as from left to right; all shells with a few exceptions turn in their volutions from right to left, for which reason these reverse shells are named Heterostrophion---Picta, Painted, Jamaica, excessive rare. These were purchased at the late Duchess of Portland's Sale for five Guineas--Citrina, Citron, China, an elegant suite,

Gallery. Conchol. Division. Univalves.

displaying all the variety of Bands and Colour.---Helix Gaultierana, Rough, said to be a native of Spain, rare---Cornu Militaire, Military Horn, unknown scarce---Otis, S. Ear Shell, East Indies, rare---Scarabæus, Cock Chafer, China, rare---Perversa, Reverse Helix, Prince's Island. This is another Heterostrophion Species, rare---Fulva, Yellow. This is the Right-Handed Shell of the preceding species; they are of several colours, as green, yellow, &c.---Janthina, Violet, Mediterranean Sea.

Genus *Nerita*.—Polita, Painted Hoof, Madagascar, China, &c. An extensive suite, including all the varieties of colour--Mammilla, White Breast Snail, East Indies---Fulvum, Tawny Ditto, Haynam, rare---Albumen, Bull's Eye, North America---Corona, Long-Spined, River Ganges, very scarce, in the highest preservation---Virginea, Guinea Fowl, West Indies—Viridis, Green Peas, West Indies---Zebra, Zebra, Sumatra, rare.

Genus *Haliotis*.—Carinata, S. Ridged, Cape of Good Hope—Marmorata, Striated, Guinea—Tuberculata, Rough, Guernsey—Assinina, Slender, China —Iris, Rainbow or Iris, New Zealand, scarce—Midæ, Wrinkled, Cape of Good Hope——Globosæ, Bellied, Arabia—Parva, Angulated, China; this and the preceding species are unperforated ears. Most of these species are in fine suites, and many of them uncoated to shew their pearly coat.

Genus *Patella*.—Cymba, S. Compressa, Linn. Boat, Cape of Good Hope —Pulchra, S. Beauty, Do.—Testudinaria, Great Buckler or Tortoise, Phillipine Isles—Umbella, Chinese Umbrella, China, scarce—Granatina, Granulated, Cape of Good Hope—Tuberculata, Medusa's Head, Mediterranean— Aurea, S. Marygold, Barbary, rare—Atrata, S. Black Pear, Peru, rare— Tenuis, S. Thin Bronze, Falkland Isles—Petasus, African Parasol, or Sun Shade, Cape of Good Hope—Granularis, Ruby or Garnet Eye, Ditto—Astræa, Brown Star, Ditto—Saccharina, Pied Star, China, scarce—Ungarica, Great Fool's Cap, Mediterranean and English Coast—Radiated, Great-Rayed Falkland Islands---Chinensis, Chinese Hat, China.

Genus *Dentalium*.—Entalis, Common, British Seas—Album, S. Striated White, Ditto—Striatum, S. Striated Green, China—Elephantum, Fluted Green or Elephant's Tooth, China.

Genus *Serpula*.—Spiralis, S. Curled or Twined, West Indies—Cochlearia, S. Cork-Screw, West Indies—Semicancellata, Half-Latticed, St. Domingo— Anguina, Fissurated or Eel, Sicily, scarce—Harpagium, Major, S. Furbellowed Watering Pot, Nicobar Isles, scarce—Ditto Minor, S. Unmarginated, Sumatra, very scarce—Lumbricalis, Common, various Coasts.

Genus *Teredo*.—Teredo Navalis, Ship Worm, Holland, &c. &c. A small piece of mahogany, in which the shell remains, and another piece of wood, pierced by this animal, elucidates in a very extraordinary manner the ravages these destructive creatures commit on the timbers of ships bottoms, &c. The animal is of that kind called by Naturalists Terebella, and emphatically by Linnæus "Calamitas Navium." The body of this creature is soft, and almost gelatinous, but the head is armed with a peculiar shelly instrument of such amazing strength, that it can pierce the stoutest planks of oak with the utmost facility.

Miscell.

On the Mahogany Stands are placed several large and beautiful Shells (with their names affixed) with other marine articles, under handsome Bell Glasses. On the one to the left is a Gorgonia, having an Asteria Medusa, or Medusa's Head Star Fish entangled within its branches. At the bottom are placed several specimens of Millepora Foraminosa, Lace Coral, &c. On the Stand to the right is a large and fine Medusa Star Fish, beautifully curled up. On the third Stand, that recent singular marine animal the Encrinus, or Pentacrinites. This article is so very rare and interesting, that we hope to be excused for giving a minute description. Only two other specimens are known, one of which is in the Museum of the late John Hunter, brother to the

Doctor, and was originally in the Cabinet of the late Duchess of Portland, and now in the possession of the Royal College of Surgeons, London. Tho other is in France, and was the first specimen discovered. It was presented to Madame de Bois Jourdaine, by a friend from Martinique, who received it from a captain of a ship. He was unable to say in what sea it had been found. At the decease of this lady it came into the possession of M. Davilla, but it is to M. Guttard that we are indebted for having first manifested the relationship between it and the Fossil Pentacrinites or Encrinus. Memoires de l'Academie des Sciences, de l'An. 1755. Gallery. Conchol. Division. Miscell.

Mr. Ellis also gives the following account of a recent Encrinus, or Star Fish, (with a jointed stem,) found on the coast of Barbadoes. Phil. Trans. vol. lii. part 1st. p. 357. "Encrinus, capite stellato ramoso dichotomo, stipite Pentagono, equisetiformi."

"The stem and head of this animal, in its present state, measures about fourteen inches; the stem is about thirteen inches in height, and about the third of an inch in diameter, lessening a little towards the top. It is formed of pentagonous joints, or vertebræ, placed regularly over one another, which are of a testaceous substance, and united by very thin cartilages, as appears by examining minutely the base of the lowest vertebræ, where it is fastened to the starry indentures of the joint; this makes the vertebræ capable of bending at the will of the animal, in any direction.

"If we examine the five furrows or channels along the stem, we shall discover a small hole between every vertebræ; and in the centre of the base of the lowest, we shall find a small hole there, which probably communicates through the middle of all the vertebræ, to the cavity in the centre of the head.

"Along this stem at different distances, from an inch and a quarter to a quarter of an inch in length, we observe many series of five cylindrical jointed arms; each series is of equal length, and placed in a wheel or whirl-shaped form like the equisetum, or horse-tail plants. Each arm is inserted in one of the five cavities of a vertebræ, and each joint into one another, that the upper end of one joint inclines over the lower end of the next to it, which it appears, at the same time, to inclose with a small margin. These joints are generally about one-twelfth of an inch in length, and the same in diameter, and have a small hole communicating with the starry centre of the vertebræ, and running through their centre to the hooked joint at the extremity of these arms.

"On the under or inner side of these joints, their surface is rendered uneven by minute tubercles, by means of which, and of the hook, which the last joint forms, the animal can take a more secure hold of whatever he seizes.

"But as the stem of this animal appears to be broken off at the bottom, we must remain in doubt whether it moves about the sea, or is fixed to rocks and shells by a base, like Corals, Sponges, and Keratophytons.

"We now come to what is called the head, perhaps the body, of this animal; for in the centre of this dry specimen, there still remains a cup of a crustaceous substance, and of an oval form, about an inch in length, and three quarters of an inch over, and a quarter of an inch deep; in the centre of this is a small hole, which apparently communicates with the internal part of the vertebræ of the stem; in this cup or cavity, it is probable, were the intestines and stomach of the animal, as in the Asterias, called Caput Medusæ. This cup is supported by the bases of six dichotomous testaceous arms or branches (perhaps five is the natural number, for one seems irregularly placed); these lower parts or bases of the branching arms, consist of three joints each, and surround the cup, to which they seem united; each of these divide into two other jointed branches, that are round or convex on their under side, but flattish on the upper, with a deep groove running along the middle, which is furnished with two rows of suckers like the Sepiæ or Asteriæ. From the upper edges of each alternate joint of these branches arise two rows of small jointed

Gallery. Conchol. Division. Miscell.

claws, like fingers; these two opposite rows bend in towards each other: Each small branch or finger is about half an inch long, and one twentieth of an inch broad; the size of these joints diminish a little, till you come to the last joint which ends in a point. Each of these joints is pointed at top, and being concave, embraces the lower convex part of the next above it; these are likewise furnished on their concave side with two rows of suckers, clasping together; they secure their prey with these opposite claws or fingers."

This very minute description by Mr. Ellis was taken from the identical specimen now in the Hunterian Museum, Glasgow.

By the discovery of these valuable remains, it has been ascertained, that recent animals exist, which are at least of the same genus with the Pentacrinites or Encrinus, whose remains have so long engaged the attention of the curious. It does not, however, appear certain, from the opportunities which have hitherto occurred of making the necessary comparison, that either the specimen of the recent animal of Mad. Bois Jourdaine, or those in the possession of the College of Surgeons, London, or in the Hunterian Museum, Glasgow, can be considered as of the same species with those of whose fossil remains we are acquainted.

Under this Glass is also placed a small card box, containing specimens of pentagonal and other joints of a Fossil Encrinus or Pentacrinites, being the nearest analogue for comparison, that we are acquainted with. Presented by Captain J. Laskey to the Museum.

FOSSILS.

Saloon. Fossils.

The opinions of Naturalists have been so much at variance concerning the origin of these substances, that we hope to be excused, if we give a brief general account of the subject, before we describe the specimens. Mr. Parkinson of London, has published in 3 vol., a work entitled, "The Organic Remains of a former World, containing a full examination of the Mineralized Remains of the Vegetables and Animals of the Antediluvian World, generally termed Extraneous Fossils." Till these volumes appeared, (to which we have been indebted for many of the facts in our description of this department) we were not furnished in the English language, with a regular and connected account of the numerous petrified bodies, abounding in so many parts of the world. To this may be attributed, the neglect of a study full of interest, instruction, and amusement; and that these truly astonishing substances have hitherto excited a transient wonder only.

By shewing the importance and great curiosity of this subject, we hope to persuade those, under whose eye these objects often pass unheeded, to regard and to collect them: particularly the Fossils of this part of the kingdom. At the Museum, they will be always thankfully received, and carefully preserved.

The few English Writers prior to Mr. Parkinson, were Thomas Lawrence, who in 1664, published his "Mercurialis Centralis; or an account of Subterraneal Cockle and other Shells found in Norfolk."

Lhwyd in 1699 published his "Lithophylacii Britannici Ichnographia," containing a very ample catalogue of English Fossils in the Ashmolean Museum.

Dr. Plott in his History of Oxfordshire and Staffordshire in 1686, describes several English Fossils found in these counties.

Dr. Morton in his History of Northamptonshire, and Dr. Leigh in his Natural History of Cheshire, Lancashire, and of the Peak of Derbyshire, records several curious particulars relative to Fossil bodies, found in these parts.

Dr. Woodward published a catalogue of his collection of English Fossils, which are now preserved in the Museum of the University of Cambridge.

Some notices are also taken of these bodies in Christopher Merrot's "Pin-

Saloon. Fossils.

ex rerum Naturalium Britannicorum," published about 1667. About the same time Mons. Childrey published at Paris, " L'Histoire des Singularites Naturelles d'Angleterre, d'Europe," &c. in which several English Fossil substances are described.

The Works of Martin Lister, 1685, contributed much towards diffusing a proper idea respecting the origin of these substances. By these the student was enabled to form a comparison between the original shell, and the shell in a fossil state, from the numerous plates which accompanied his works.

It is obvious how much the works of Lister must have contributed to produce a just judgment of the real nature and origin of these substances; and to this circumstance, perhaps, we ought, in part to attribute the change in opinion, which very generally took place about this period. Still, however, the science was involved in that cloud, which had so long obscured it. The Vis Plastica, the Vis Formativa, and the sportive creations of nature, were terms yet in frequent use. Those that were more than half convinced, but had not quite shaken off the influence of long adopted opinions; as well as those, who though quite convinced, had not the courage to acknowledge having been in error; spoke of these bodies in the indefinite language of lapides figurati, lapides idiomorphi, lapides qui figuram habent conchæ, cochleæ, &c. Some indeed would venture to term them conchæ lapideæ, ostreæ lapideæ, &c. carefully avoiding to speak of their origin, or to admit them to be bodies, changed from their original animal state to that of stone.

Careful investigation, however, having rendered it manifest, that these substances were neither the productions of chance, nor the creatures of these imaginary capricious powers, they excited more general attention, and being better understood, they became more capable of systematic arrangement, and the study of them embraced more of science.

The eighteenth century therefore commenced under the most favourable circumstances for this science, and several foreign authors published rational theories respecting these substances, among whom Scheuchzer was the first: In 1702, appeared his " Lithographia Helvetica Curiosa," which was followed in 1708 by his " Piscium Querelæ et Vindicæ"; his " Herbarium Diluvianum" in 1713; and " Museum Diluvianum" in 1716.

Mylius, Bajer and others described the oryctological discoveries which had been made in the several parts in which they resided, or had explored.

Linné and Wallerius, in their different systems of arrangement, have taken a very comprehensive view of the objects of our enquiry, and the Oryctology of d'Argenville is replete with information. Gesner's (Jo.) " Dissertation de Petrificatis," published 1758, is highly valuable as a faithful and neat compendium of the Science. Also the work of Bourguet, " Traite des Petrifactions," is very useful, from the illustration of faithful plates, and the advantage of a convenient arrrangement. But the work which comprises the most information is that of the celebrated Mr. Knorr, published in Germany, entitled, " Recueil des Monumens des Catastrophes, qui la Globe de la Terre a essuyées." This magnificent work is contained in three folio volumes, with elegant coloured plates of the different specimens. It was begun by the learned G. W. Knorr, and at his death was continued with equal care and zeal by Mr. Walch.

Since the republication of Lhwyd's Lithophylacii, the only works published on these subjects in England, are descriptions and plates of petrifactions found near Bath, by John Walcott; and Gustavus Brander's Fossilia Hantoniensia in Musæo Britannico deposita; the scientific descriptions of which were written by Dr. Solander. Also through the whole series of the philosophical transactions of the Royal Society, is dispersed a considerable portion of information, respecting the remains of the ancient world, in communications from most of the learned Naturalists of the time; among which the name of Dr. HUNTER stands conspicuous.

Saloon.

Fossils.

A few interesting observations may also be found in the physiological disquisitions of Mr. W. Jones, published in 1781.

Mr. Martin of Buxton, published a few numbers of a work on the Derbyshire Fossils, but it was given up at his death. And Mr. Sowerby of London is now publishing in monthly numbers, with elegant coloured plates, the Fossil remains of this Kingdom.

No doubt can be entertained but that these substances denominated Fossils were known in the earliest ages. We have only to refer to the philosophical writings which have been transmitted to us for these proofs Xenophanes who wrote five hundred years before Christ, and who contended for the eternity of the universe; to support his opinion, dwelt much upon the circumstance of petrified shells being found in the internal parts of the mountains, and in the bowels of the earth; and adds, that in the quarries of Syracuse, impressions of fishes existed, and inferred from these appearances, that these places must, in very distant ages, have been covered with the sea.

Herodotus who wrote four hundred and forty years before Christ, speaks particularly of shells existing in the mountains of Egypt.

Theophrastus was supposed to have written a book entirely on petrifactions, and which though amongst his lost works, was imagined to have been in the possession of Pliny, and to have yielded him some portion of assistance in that part of his Natural History.

Eratosthenes who lived two hundred years before Christ, when enquiring into the figure of the earth, also considered it as a question worthy of investigation: "How it could have happened that vast numbers of oyster and "other shells should be found scattered in many places at a very considerable "distance from the sea?" This phenomenon had also been noticed by Strato, and by Xanthus of Lydia, as well as by Strabo himself, who refers to, and corroborates their remarks in the first book of his Geography; particularizing some of the species of shells thus changed, and the places where they were found.

That substances, which had undergone this extraordinary change, existed upwards of two thousand years since, in quantities so considerable as to have excited the attention of the Grecian Philosophers, is therefore very evident, and we find almost all of them contending for the eternal duration of the world; finding it difficult to conceive any period of time, in which changes, so vast and extraordinary, could be accomplished.

Pliny, who wrote above 1800 years ago, in that part of his writings which are considered as having been derived from the lost work of Theophrastus, before mentioned, describes various substances which future observation has taught must belong to the class of Fossils.

Alexander ab Alexandro says, (in Genialum Dierum, liber quintus, 1532) "he remembers to have seen in the mountains of Calabria, at a considerable distance from the sea, a variegated stone of hard marble, in which many sea shells, but little changed, were heaped together, forming but one mass with the marble itself."

Tertullian (De Pallio, cap. II. page 6. ed. Salmas.) also anxiously endeavouring to prove, from natural appearances, that a general deluge had, according to scripture, taken place, dwells particularly on the discovery of the remains of marine animals on mountains, and on various parts of dry land, at a considerable distance from the sea.

In France, Italy, and Germany, the most ardent and scientific enquiries have been instituted: in consequence of which discoveries of the most curious and interesting nature have been made. These, however, having been published either in French, German or Latin, and not having yet appeared in an English dress, it is not to be wondered at that the astonishing information which they impart, is so little known in this country.

To account for these phenomena, various opinions have been formed and supported by different writers, the principal of which were grounded on

Saloon.

Fossils.

the vis formativa of Aristotle. The doctrine of equivocal generation adopted by his disciples contributed very much to mislead those who made these substances the subject of their enquiries; since by adopting the aid of certain occult qualities, their origin was supposed to be thus satisfactorily accounted for. Certain plastic powers were supposed to employ their influence in the earth, in creating substances which bore the figure and resemblance of various vegetable and animal substances; to account for their formation, therefore, it was thought sufficient to refer to the hidden powers of the vis plastica, the vis formativa, and the vis lapidificativa.

In the 16th century, about the year 1517, the workmen employed in rebuilding the Citadel of St. Felix, at Verona, discovered that the rock on which it was built was full of petrified shells. This discovery considerably excited the attention of the learned; some attributing them to the active influence of the vis formativa, whilst others perceiving their exact resemblance to real shells, declared, that they must be actual marine bodies thus enveloped in stone by some accident. When Frascatorius was asked his opinion respecting this phenomenon, he answered, that "it had been accounted for in three different ways, viz. to the vis plastica and the vis formativa of Aristotle; and that others supposed these substances to have been real marine bodies, deposited in these places at the time of a general deluge; whilst others agreed in his opinion, that the parts where these bodies were found had formerly been covered with the sea, which gaining insensibly in some parts on the dry land, gradually changed its bed, leaving the positions it had formerly occupied, for the cultivation and possession of man."

The first writer who unreservedly asserted that the stones bearing the form of shells were actual petrifactions of natural shells, now converted into stone, was Wolfgang Wedel, who published it in a Dissertation entitled, De Conchis Saxatilibus, in the Ephemerides published under his direction, 1672.

The celebrated Langius was among the last supporters of the opinion of the generation of these bodies in the bowels of the earth, and strenuously contended for their having thus obtained their forms and existence.

Dr. Plott believed their figures to result from the operation of certain plastic powers, with which certain saline bodies were endowed; and lastly, Lhwyd, who combated the vis plastica of Plott, and supported the idea of their production from the semina of fishes, &c. raised with vapours from the sea, and thence conveyed by the clouds and rain, through the crevices into the internal parts of the earth.

The more rational conjecture of Woodward, who attributed their situation to the effects of a general deluge, was rendered of less effect, in opposing these notions, from his having attributed to the waters of the deluge, an almost universal solvent power, by which he supposed the rocks and mountains were melted down, and thus allowed the admission of these substances into their external parts: not considering that by the same power these bodies would themselves have been reduced to a mass, and thereby prevented from preserving their natural forms.

From these observations it appears, that until these last hundred years, the nature of the substances denominated fossils, was so little understood, that the most vague and unphilosophical ideas were universally entertained respecting them. Men of considerable learning, either contented themselves with the popular opinions, or substituted for them theories still more silly and preposterous. Tournefort and Camerarius fully believed in the vegetation of stones, and were convinced that their seminal principles diffused, as well through the seas as the earth, were gradually developed, and reduced into their appropriate forms, by a regular apposition of their particles, somewhat in the same manner as in the formation of regularly formed crystals; every figured stone was supposed to have had its peculiar seed, its nourishment, and its growth. The beautiful formed stalactites which adorn the caverns in

Saloon. Fossils.

various parts of the world, were supposed to be proofs of this species of vegetation, since their size was observed evidently to increase, and apparently in determined forms.

From the total ignorance which subsisted respecting these substances, all the earlier writers contented themselves with employing words to describe them, which denoted their resemblance to certain forms, describing them generally as figured stones; (lapides figurati, and lapides idiomorphi.) Others who supposed they owed their forms to certain extraordinary changes which took place at the period at which the earth was overwhelmed by the general deluge, described them as diluvian stones, (lapides diluviani); but when the discovery was made that most of these figured stones were remains of subjects of the vegetable and animal kingdom, these modes of expression were found insufficient; and whilst endeavouring to find appropriate terms, a considerable difficulty arose; language not possessing a sign to represent that idea which the mind of man had not till now conceived. Necessity drove him to the alternative of either coining new words, or of selecting from those already in use, such as might be adopted for the description of these substances. The latter mode was preferred; and the word Fossil, which had hitherto been appropriated to the whole of that class of bodies which had been dug out of the earth, appearing to approach the nearest to the idea which was wished to be conveyed, it was almost universally adopted to mark this new order. But as confusion might arise from employing the same word to describe both the class and the order, it was recommended by Sir John Hill, for the sake of precision, to annex to the word Fossil, when expressive of the order, the epithet extraneous, or adventitious.

As none of the terms hitherto enumerated marked the change which had taken place in the nature of the substance, this was proposed to be expressed by adopting the term petrifaction. The prevailing practice with writers on mineralogy, appears at present to be either the employment of the last mentioned term, or the annexing one or the other of the adjectives, (adventitious, or extraneous,) to the substantive, (Fossil,) whilst in the common language of those most conversant with these substances, the idea is conveyed by the substantive alone.

The word Fossil therefore appears to be the only word our language can supply, which is capable of being employed as the term denoting these substances in general. The propriety of adopting it will appear when we consider its derivation, and the characteristics of the bodies it is intended to signify. In the contemplation of these bodies, three circumstances offer themselves for our particular notice: first their having been dug out of the earth; second, their original mode of existence; and the third, the nature of the change which they have undergone.

Fossils may, according to their origin, be divided into two classes, Vegetable and Animal Fossils. These again are capable of being divided into orders, genera, and species, which classification, although impossible to be made correspondent with that of their recent analogues, will still, however, yield some advantage in the prosecution of this study.

It must, however, be remembered by the Collector, that many substances commonly named petrifactions and fossils, are not really so; these are, 1st, Impressions, (Impressa of Linn. Typolithi, Wallerii; Type and Ectype, Breynii; Figuratorum Lapidum Matrices, of others;) these are certain hard, but once soft mineral substances, which retain the figure which has been impressed on them by some real fossil. 2dly, Casts, (Redintegrata, Linnæi; Petreficata spoliata, Luidii and Noyau, of the French writers;) these are formed by the deposition of mineral matter in the cavities of animal or vegetable substances, or in the vacuities left by the decay of organized bodies involved in some solid matrix. 3dly, Incrustations, (Incrustata, Linnæi;) these are formed by an apposition of mineral matter, generally by precipitation or deposition, as effects the envelopement of some vegetable or animal body in a mineral crust.

Saloon.

Left Apartment.

Fossils.

Our descriptive remarks commence at the Case marked A. in the recess of the left window, in the left hand apartment of the Saloon; and it is intended to describe our selection of the Fossils together, and not to divide them into detached sections, which, from their present arrangement in the Museum, must have been done, if we had described them according to the apartments in which they are placed; and as each Case will be designated by a particular mark referring to this catalogue, a reference can easily be made for any individual specimen the visitor may wish to inspect or ascertain.

Case A.

Case A. (No. 1.) In this Case and the adjoining one, are several specimens, in fine preservation, of the Fossil Fish, from Vestena Nuova, commonly called Monte Bolca. This singular mountain is situated on the border of the Veronese territory, about fifty miles W. N. W. of the Lagumer of Venice, which is supposed to be the nearest sea. The quarries from which these fossils are taken, lie about half a mile from the summit of the mountain, consisting of a marly schist; it is a whitish yellow, or bluish grey, and in general yields easily to the knife, emitting at the same time a fœtid smell. The forms of the fish are well defined, and the harder parts are remarkably well expressed. The dark brown matter of these fish-remains are distinct, and may easily be picked off from the stone, projecting in proportion to the thickness of each part in its natural state; it is hard, brittle, and rather glossy throughout, except in some of the larger bones, such as the joints of the vertebræ, which though of this appearance externally, are found when broken, to consist internally of laminar crystalized calcareous spar. So many species are contained in this mountain, that above 600 distinct specimens of different species and sizes, were preserved in the cabinet of M. Bozza, the original proprietor of the soil.

We may notice the very ingenious explanation of the phenomena yielded by the fish of Monte Bolca, and their surrounding matrix, by Mr. Graydon. He supposes the fine light-coloured calcareous mass in which they are embedded, to have been formed by the deposition of carbonate of lime, from lime stone heated by volcanic fire, and plunged in this state in the ocean. By this means he thinks the fish would be destroyed, and would remain in the calcareous magma, which as it became condensed, would retain and absorb the putrid gasses evolved from the fish, and would thereby become a stink stone, yielding its peculiarly offensive smell by attrition. Trans. Irish Acad. vol. v. p. 281.

2. Fossil Fish, in a black fissile stone, from Gijon near Naples. A similar specimen (marked 2 B.) from Eisleben in the county of Mansfeldt in Upper Saxony; this schist which is argillaceous, is very hard and black, and overlays coal. These fish are found in various states, some laying straight, others bent, but all of them evidently much compressed; the whole surface, in general, of the impression, is as if it was varnished, or according to Mylius, as if covered with naptha; and many of the scales are entirely resplendent, and variously coloured, from their having become pyritous; from which circumstance these specimens often possess a very beautiful appearance.

3. A fine specimen, nearly perfect, about ten inches in length, of the fossil remains of a fish in chalk. The country where this curious article was discovered, is unknown, but supposed to be of English production; it is so rare, the writer has never seen but this exemplar; even Mr. Parkinson, in his Organic Remains, has no mention of fossil fish in chalk, except teeth and vertebræ; neither did these appear in that extensive collection, the London Museum, formed by that industrious collector Mr. Edward Donovan of London, author of British Natural History, &c. a single specimen, although neither expense nor labour was spared in collecting that immense Cabinet, consisting of almost every article in British Natural History known; so that we have every reason to suppose this specimen to be unique.

4. Several specimens of the Claws of Crabs in their Matrix, from St. Pe-

Saloon. Left Apartment. Fossils. Case A.

ter's Mountain, Mæstricht. It is observed by Faujas St. Fond, that there is no fossil, in this and the neighbouring mountains, more frequent than the claws of crabs; but it is an extremely remarkable circumstance, that, notwithstanding the abundance in which these are found, no remains of the body, or of the other parts of the animal, are here discovered. After long reflecting on this circumstance, this industrious enquirer thought it right to conclude, that these remains had belonged to some crab of the parasitic kind, as (Cancer Bernhardus, Linn.); the softness and delicacy of every other part, except that of its claws, would, he thinks satisfactorily explain why these alone have been thus preserved. In confirmation of this opinion Latrielle, a Naturalist who has paid particular attention to the examination of Crustacea, concludes from the curvature, direction, and general form of the arm of the crab, and from the absence of every other part of the animal, that it must have belonged to a hermit crab, (Pagurus Bernhardus.) In both, he observes, the right arm is the strongest, and the form of the hand is the same; the only difference between them being a larger number of asperities on the finger of the fossil crab, which is also rather longer than that of the recent crab. The upper edge of the hand, too, of the recent animal, has also some asperities which are not observable on the fossil hand, but these, he thinks, may possibly have been removed by friction.

5. Scales of Fish in an aggregate mass, from Sheppey Island.

Case B.

Case B. (No. 6.) A very rare and valuable specimen of a variety of the Trilobite with its counterpart, supposed to be from Papenheim. It seems to be nearly allied to the Monoculites Lunatus of Mr. Martin, plate 45, fig. 4. The head is large, nearly semiorbicular, lunated posteriorly, and terminating at the sides in an acute angle. The body is short, formed of several transverse plates, its sides going off directly from the head, and meeting speedily at an obtuse angle. From this point proceeds the tail, which is longer than the head and body together; the structure of the tail appears to be formed of a long central spine-like process.

7. Two small slabs of the fissile cream-coloured Lime-stone from Papenheim, in which the traces of an insect are sufficiently distinct to mark its presence, without, however, being sufficiently so, to point out the genus to which it belongs; they are apparently of the same species. The head of the animal is plainly to be seen, but none of its parts are distinguishable, it appears to have been connected with the thorax by a contractile neck, as we have observed in other specimens the same species with a short and also a lengthened neck. The thorax appears to have been nearly cylindrical, and much shorter and wider than the abdomen, which is of a lanceolated form, and is evidently composed of about eight or nine articulated rings; the tail of this animal terminates in three points; but the tail, in many specimens which we have seen varies, although no doubt exist of the species. The most accurate examination that we have been able to make does not enable us to discover any traces of wings. The legs are eight in number, and are attached to the breast. These insects have been supposed to have belonged to the genus Vespa, but we should rather dispose of them among the marine insects, whose analogue is now unknown.

8. A fine cast of an Echinanthus of Leske, from Malta. This species he names Scutum Altum, vel Echinanthus Altus. It has never yet been met with in a recent state, and is a rare fossil. It is rather of an oval form, and is divided into ten areæ by five biporous pentaphyloideal ambulacra; the five smaller areæ, being comprised in the pentaphyloid surface formed by the ambulacra, and having grooves passing across them, and connecting the immediately opposite pores.

9. Several specimens of Vertebræ of Fish from Sheppey Island. It is rather a singular circumstance attending these Fossils, that they are seldom or ever found possessing either their spinous or transverse processes.

10. Specimens of Fossil Crabs from Sheppey Island. Crabs apparently similar to those which are found at Sheppey, are also obtained from the neighbourhood of Verona, Malta, and Anjou in the department of Maine and Loire. Saloon.

11. A small Fossil remain of a species of Lobster, also from Sheppey; the transverse plates of the tail are very distinct. Left Apartment.

12. A Spinous Bone several inches in length in its matrix, supposed to have belonged to a species of some unknown fish, or probably the spinous tail of No. 6, to which it bears a strong resemblance. Fossils. Case B.

13. Several detached specimens of the Palatum Limax, or the Slug Palate, commonly called by the quarry-men Petrified Leeches; these are found in the lime-stone of Wiltshire, Oxfordshire, and the Cliffs at Lime in Dorsetshire. These bodies are of an oblong figure, and generally a little pointed towards their ends; their colour is a dark brown, and frequently possess a tolerable polish; on their upper surface are innumerable fine and slightly undulating rugæ, which commence at the sides, and sometimes unite in a fine irregular line, which passes longitudinally along the middle of this surface; the whole appearance of this fossil very much resembles that of a leech or slug in a contracted state. From these bodies having been lately found in a regular disposed manner, placed in four rows, to the amount of twenty-five, there can be no doubt that they are not single palates, but that many of them regularly set, constitute the platform of the palate of some unknown fish.

Case C. (No. 14.) Several specimens of Trilobites from Dudley in Shropshire; commonly called the Dudley Fossil. These possess so few of the appearances exhibited by any existing animal, as to have rendered many ingenious Naturalists doubtful whether they should consider them as the remains of a crustaceous or of a conchiferous animal. Various names have also been given to them, derived chiefly from the three lobular divisions, by which it is so particularly marked; and several appellations have also been applied, founded on these remains being sometimes found in a coiled, and sometimes in an extended state, as well as from the head and tail part being frequently found separated, giving room for suspicion that they belonged to different animals. Bromel called this fossil Lapis Insectiferus; and Insectum Vaginipenne. Walterdoffs considered it a fossil bivalve shell, and named it Conchites Trilobus; Herman, Pectunculites Trilobus Imbricatus; Da Costa, Pediculus Marinus; Linné, Entomolithus Paradoxus; Baumer, Trigonella Striata; and by Wilke, Entomolithus Lancriformis Marini; and others again Anthropormorphita, &c. Mr. Martin in his Hist. of Derbyshire Fossils concludes it to be an Oniscus. We have no doubt but it is of marine origin, and think with Mr. Martin, it is of the Oniscus genus. In a MSS. Catalogue of the Fossils lately belonging to Mr. Ingham Forster of London, drawn up by Mr. E. M. Da Costa, now in our possession, is a description thus, "small flat smooth Ammonitæ like river snails; one of them has a small Pediculus Trilobus adhering to it." From Mr. Pond's Sale. Parkinson in his Organic Remains, recommends to form a new genus for it by the name of Trilobites, in which many distinct species may be arranged. These remains are evidently the upper covering only of the animal, and appears to have been of a crustaceous nature; it is of an oblong ovate form, convex and surrounded by an uninterrupted border; the head is large and gibbous, and divided longitudinally into three parts; the middle one rounded, gibbous, and rough, having at its posterior part two round projecting knobs; and just before these, two smaller. On each side of this body is a triangular surface; from the centre of each of these proceeds a valvular projection, which, from its form, appears to have been capable of being occasionally opened or closed. Case C.

The back is formed of strong, convex, triarcuate segments, varying in number with the size of the animal, and diminishing in size as they approach the caudal termination. These segments are more raised in their middle than at their sides; and in the recent animal (it is supposed,) the superior, by sliding over the inferior ones, allowed the animal to make very considerable

Saloon.

Left Apartment

Fossils.

Case C.

changes in its form, by extending or contracting itself; the tail is obtuse and without any appendage. These specimens are about the usual size, and of the various forms in which they are generally found. The Author has seen two specimens each as large as a goose egg, which were sold by public sale in London for ten Guineas. These are now in the Cabinet of Mr. Edward Donovan, Proprietor of the late London Museum of British Natural History.

A very singular circumstance also attends this Fossil, that no under covering or plate have been as yet discovered. We have broken and rubbed down several, but have never been able to find any remains of an inferior or ventral covering corresponding with the upper one. On breaking them, the inner surface of their covering is found marked with undulating striæ, the impressions of which are also found on the inclosed matrix.

15. Two specimens of a singular variety of the foregoing species. These are generally found embedded in the fuller's earth pits of Kent; the form of the head we are unacquainted with, having never seen a specimen complete; they are commonly designated by the name of the Butterfly Trilobus. This variety differs from the preceding species in two material respects; the lateral lobular divisions are wider than the central one; and the outline of the animal approaches much nearer to the elliptical, than the ovate form; the central division of the plates terminates within a marginal line which surrounds the division. From the inferior part of this line proceeds a long and narrow caudal process, which tapers as it descends, and appears to have been formed of a single plate or substance; seldom these specimens possess the process itself, the impression only of its lower surface being left.

16. Various specimens of the Belemnites, shewing their different forms, structure, and present substance, in suite. The Belemnites is a conical or fusiform stone, composed of a brown radiating spar, generally terminating at the small end in a point, and having at the larger end a conical cavity, naturally retaining a conical testaceous body, divided into chambers, and pierced by a siphunculus. In the early ages the vulgar assigned various names to this fossil, as Devil's Fingers, Spectrorum Candela, and Idæus Dactylus, from being found on Mount Ida; and Lapides Lyncis, from their supposed origin from the urine of the Lynx. Ovid, alluding to this origin, says:

> Victa racemifero lynces dedit India Baccho:
> E quibus, ut memorant, quidquid vesica remisit
> Vertitur in lapides, et congelat aëre tecto.
>
> Metamorph. lib. xv. v. 413.

The colour of this fossil is generally brown, in different shades, but it varies much in its degree of opacity in different specimens; some being so transparent as to allow the rays of light to pass through very freely, whilst others are nearly opaque. In their forms they display a still greater variety, some are cylindrical, some pyramidal, and others fusiform. The smaller end of some are pointed, of some rounded, and of others rounded in a certain degree, but terminating in an abruptly projecting point. Some Belemnites, and particularly the fusiform, have a longitudinal sulcus (see specimen C.) but what has been the use of this sulcus cannot even at this time be guessed, and so perplexed were the earlier writers on this fossil, respecting its nature and origin, that they were even puzzled to ascertain under which of the natural kingdoms to place it. Early writers on Mineralogy considered it as belonging to the mineral kingdom; and even Mr. Woodward and Da Costa thought it a stone, *sui generis;* Languis thought it was a Stalactite; Libavius considered it to be indurated amber; Stobæus and Helwing were of opinion that it was of vegetable; and others considered it to be of animal origin; but even in this opinion no small discordance appears among them; by some it was supposed to have been the tooth of a Crocodile; by others a Physeter; Lhwyd thought it belonged to a species of whale resembling the Narwhall; and again it was said to be a spine of an Echinus; M. Titius conjectured it to be one of the ex-

tremities of a species of Stella Marina; M. de la Tourette believed it to have been a species of Polype; and Waller and others a species of Holothuria. Saloon.

Later Oryctologists, particularly Rosinus, Erhart, Breyn, Klein, and Linné, have agreed, that this body must be considered as the remains of the chambered shell of a marine animal, the recent analogue of which is unknown. With this opinion Mr. Walch perfectly agrees, believing it to be supported by the circumstance of the nacre of the shell having been discovered on the outside of some of these Fossils, and by the marks having been seen of such a laminated structure, as is frequently observed in shells, whilst in a state of decomposition. Left Apartment Fossils. Case C.

But few observations offer themselves respecting the concamerated part of this Fossil, see (B.) That its first chamber was the testaceous receptacle of an animal, which in all probability was enabled, by its connection with the siphuncle, to vary its situation in the water, appears to be universally admitted. The siphuncle, in all the specimens that I have seen, pass through the side of the septa; and we presume this is always the case. Belemnites are found of various sizes; from that of a raven's quill, to a foot in length, and two inches in diameter at the largest end.

The brown spathose matter which fills the hollow of the shell, is formed by radiating crystals, intersected concentrically. This is found to vary in its figure so much, that Parkinson proposes it as a guide for distinguishing three distinct species, as B. Fusiformis, B. Cylindriformis, and B. Coniformis.

The structure of the concamerated part of the Belemnite leaves not a doubt that, like the Nautilus, it was sunk or raised in the water by the action of an appropriate organization.

It is hardly necessary to observe, in favour of the marine origin of the Belemnites, that they sometimes have other marine bodies, such as Oysters, Serpulæ, Coral, &c. attached to their surface.

That these animals existed, in very considerable numbers in the former world, is very reasonable to suppose, from the very wide extent over which their mineralized remains are now found. Near this city at Thornlie Bank, fine specimens are to be met with.

No. 17. Orthoceratites, a straight or slightly bent, rather conical multilocular shell; the chambers separated by transverse curved septa, pierced by a tube. Gesner and Aldrovandus considered them as petrified tails of crabs; the former naming them Cauda Cancri, C. Astaci Fluviatilis; and the latter Cancritæ. Our countryman Lhwyd satisfied himself by considering them as Alveoli; and to belong to a large species of shell not ascertained.

No correct knowledge, however, was obtained respecting them, until Breyn and Klein made them the objects of their investigations, and were thereby led to the conclusive fact that they were the remains of a marine univalve chambered shell.

The fossils of this Genus, like the Nautili are divided into chambers by septa, through which passes a tube or siphunculus, varying in its form, situation, and size, according to the different species.

In size, they are found from a microscopic object to that of the thickness of a man's arm. Mr. Walch says, they are sometimes found nearly four inches in diameter, and more than an ell long, possessing above seventy chambers. Many fine specimens are to be met with in the neighbourhood of Rutherglen, and they are not uncommon in Ayrshire. Specimens from this last place are now in the Museum. Marked X. Case F. Right Hand Apartment of Saloon.

No. 18. Several beautiful and well defined specimens of the Pecten Shell in their matrix, from St. Peter's Mount, Mæstricht. This genus is described as a regular, eared, inequivalved bivalve, with contiguous beaks; the hinge toothless, the pit trigonal, receiving the internal ligament; one muscular impression. The specimen (marked C.) bears analogy to Pecten Varius, (or Ostrea Varia, Linn.) and is a very beautiful fossil. D, is a fossil valve of a species of Oyster from the same place, embedded in its matrix.

Saloon.

Left Apartment

Fossils.

Case D.

We have been so very diffuse in the description of the preceding fossils from their singular and uncommon structure, that we must pass over many beautiful and interesting articles in the three following Cases, which contain fossil shells of the bivalve genus, a few only of which our limits will permit us to describe.

Case D. (No. 19.) Trigonia Clavellata. A triangular shell beset with nodular projections, disposed on the disk of the valves in rows, in a transverse curved direction; on the anterior side, a sloping, slightly rugose surface, widening from the beaks to the anterior point of the valves, and ornamented with three crenulated ridges; the innermost of which enclose a long oval area, faintly marked with longitudinal striæ, and reaching from the beaks nearly to the anterior termination of the shell. Beneath the beaks is a small sulcus, apparently for the reception of the cartilage. These shells have been long known and admired in their fossil state, both in this Island and on the Continent. Dr. Plott, in his History of Oxfordshire, calls them Hippocephaloides; and from the characters of three different species of shells being combined in this one, as the muscle, ark and venus, authors have been at a loss in which genus they should be placed, and the new genus Trigonia has been formed for their reception by Mons. La Marck. Mons. Peron discovered a complete recent shell of this genus on the coast of New Holland at Captain King's Island, and some separate valves at Maria's Island, and the Island of Kangaroos. See Ann. du Mus. tom. iv. p. 351.

No. 20. Trigonia Rugosa, another shell of this Genus. These shells abound in the Portland stone, and at Tilsbury in Wiltshire, but it is found very difficult to extract them from the stone in a perfect state; the whole of its disk appears to have been covered with transverse rugous ribs.

No. 21. Gryphæa. These fossils are found in considerable numbers in different parts of England, particularly in Oxfordshire, Gloucestershire, Bedfordshire, Wiltshire, Nottinghamshire, and Warwickshire. Linné was induced, from the curved beak of this shell, to place them among the Anomia, as Anomia Gryphus; but La Marck, considered the termination of the beak of the under valve sufficient to allow of its being placed under a distinct genus by the name of Gryphæa, and describes it an inequivalved bivalve; the lower valve concave, terminated by a beak, and curving upwards and inwards; the upper valve much smaller, like an operculum; the hinge toothless; the pit oblong and arched; one muscular impression in each valve.

No. 22. Ostrea Diluviana, Linn. These fossils are often found five or six times the size of this specimen, it is plicated, and having the margin formed by acute-angled teeth, like those of a saw, and placed at right angles with the surface of the shell, the margin being finely striated by the opposition of the different lamella.

Case E.

Case E. No. 23. Several fine specimens of a donax-formed fossil Shell from Gloucestershire, &c. They are sometimes found of a prodigious size. The writer has seen a specimen weighing above 7lbs; as yet it remains without a name, its real characters not being detected farther than the presence of a lateral tooth beneath the depression for the cartilage on the truncated side. We have lately sacrificed many of these shells in search of the hinge, but without effect.

Case F.

Case F. No. 24. Casts of the Bivalve Fossil Hippocephaloides from Oxfordshire.

No. 25. Several specimens of Terebratulites Triquetrus, La Marck. A three cornered shell; the anterior and posterior sides compressed; the superior margin more rounded, but dented in the middle; both valves convex, and terminating in a point, with a close and curved hinge; the large valve having a narrow groove, commencing nearly in the centre, and extending to an umbilical-formed depression in its lower part, just before the beak turns; and finishes with a round foramen.

No. 26. Casts of the Chama Cor. Linn. This is a heart-formed shell, with

separated, involuted, and diverging beaks; the hinge formed by two flattened cardinal inserted teeth, and an isolated lateral tooth under the cartilage slope; they are frequently named Bucardites. Saloon.

Case G. This case contains a variety of species of fossil Echini in fine preservation, among which we notice, Left Apartment.

No. 27. Echinus (Variolata,) supposed so be from the Chalk pits of Kent. We do not know of any recent specimen analogous to it. Fossils.

No. 28. Echinus (Cidares Papillata Conoida) a very beautiful fossil from the Kent chalk pits. Case G.

No. 29. Echinus Sinuatus, (Linn.) These are distinguished as Clypei, from their similitude in form to the round bucklers of the foot soldiers of the ancients. The upper surface is convex, and divided into ten areæ, by ten striated ambulacra. One of the areæ is also divided by a groove, hollowed out from the centre of the shell, to the margin. The ambulacra, at parting from the centre of the shell, expand, but contract at the margin, and thus continue to where they meet in the centre of the lower part of the shell, which is rather excavated and grooved where the ambulacra pass. The whole of the surface of the shell is thickly beset with granular tubercula, the largest of which are surrounded by small circular risings. These are found principally at Tangley, Fulbrook, and Burford in Oxfordshire, also in Gloucestershire. Dr. Plott in his Hist. of Oxfordshire, p. 91, describes this fossil, and says, "That the centre of their rays being never placed on the top of the stone, but always inclining to one side, as that at the bottom does to the other, the axis lying obliquely to the horizon of the stone, gave occasion to a learned society of virtuosi, which during the late usurpation lived obscurely at Tangley, by consent, to term it the Polar Stone; since by clapping two of them together, they made up a globe, with meridians descending to the horizon, and the pole elevated, very nearly corresponding to the real elevation of the pole of the place where the stones are found."

No. 30. Echinocorys Scutatus, Klein. This Echinus is, in general, as high as it is long; it has like most others five large and five small areæ, separated by biporous ambulacra. Minute tubercula and granulæ, exist on some parts of the surface, and particularly on the base and near to the mouth. The base of the circumference of which is nearly elliptical, is almost flat: the edge, however, is slightly rounded; and, in its middle, a prominent slip extends from the mouth to the anus, near to which, on each side, two bands of minute granulæ are disposed. The mouth is reniform, placed crossways at the broadest extremity. The anus is of a roundish oval figure, and is near to the narrow extremity. The spine, which gives name to this species, runs down from the vertex and along the narrower end, and becomes attached to the higher edge of the anus. They are found in the Kentish chalk pits.

No. 31. Albogalerus, Linn. Conulus Albogalerus, Leske. It derives its name from the supposed likeness to the White Conical Caps of the Priests of Jove. Its shape is a pointed five-sided cone, in the vertex of which are five small areæ, bordered on each side by biporus ambulacra the remaining space being filled by five larger areæ, the mouth is small, somewhat retracted; and the anus sometimes inclining to oval. This species is figured and described by most oryctologists, in consequence of the frequency with which it is found in England, and elsewhere.

No. 32. Echinodiscus Subrotundus, Leske. This fossil Echinus is nearly circular; its upper surface is convex; the base is flat, with five narrow and slightly excavated grooves extending in right lines, and at nearly equal distances to the margin; the anus is small and round, and is placed at about a fifth of the diameter from the margin in the areæ, which is rather smaller than the others. The ambulacra appear to have borne the figures of oval petals; and are each, composed of a line formed of single pores, surrounded by three, four, five, or even six lines, of minuter pores, obliquely disposed in very small grooves. This is an Italian fossil.

Saloon.

Left Apartment.

Fossils.

Case G.

No. 33. Spatangus Cor. Marinum. This appears to be a variety of Cor Anguinum Anglicum of Klein. The characters of this shell are its being cordated, and more or less oblong; the base, in some flat, and in the superior, with fewer and smaller granulæ. The back is convex, and divided into five areæ, by as many grooved ambulacra, formed by four rows of pores, connected by transverse lines, each two rows uniting at the end of the grooves. Two of the ambulacra, the shortest, are directed obliquely towards the narrow truncated extremity; two others, longer, pass obliquely towards the broader end; and the fifth passes straight to the mouth, forming the dorsal groove Along the middle of the opposite part, a keeled edge passes directly to the anus. The vertex is perforated by four large pores; the mouth is reniform, the upper lip triangular, and extended over the lower; the anus is round, and placed in the upper margin of the acute extremity. From the anus a slight depression passes to the lower margin; at each of the angles of which is a protuberance, surrounded by a broad smooth surface. This species is found in many parts of Europe, particularly in Germany and England; are the most frequent fossils in the chalk-pits of Kent and Essex, and frequently found filled with flint. They are the Echinites Cordati Vulgares of Lhwyd. Lithoph. fig. 364, and 967.

No. 34. Spatangus Lacunosus, Klein. Is of an oval form; its upper surface gibbous, and its under rather convex. At the vertex are two, or according to Muller, four puncta. From the vertex immediately proceed four deeply obtuse ambulacra, with angular margins; within the grooves are four rows of pores, connected by transverse lines. The two posterior ambulacra, directed towards the narrowed part of the shell are shortest, being sometimes merely two deepish fossulæ; between the two anterior ambulacra is disposed another deep groove, which is also beset with striæ and puncta. On each side of the shell, are several gradually rising prominences; from which pass, in different directions, several intercurrent lines, on which minute granular tubercles are very thinly disposed; whilst the general surface is covered with tubercles of rather a larger size. The mouth is small, and nearly round; the anus is round, and placed in the upper margin of the narrower, and apparently truncated termination of the shell. From some peculiarity of structure, the specimens we have met with are always apparently distorted. The recent shell with its spines is figured in the 6th vol. of Encyclopedie François, plate LIX. fig. 4. This fossil is from Malta.

No. 35. Echinites Pyriformis, Leske. The shell is ovate, gibbous, and rather acute at one end; the base flat. On the back originate five porous, subpetalous ambulacral bands, which reach to the periphery: a carrinated line divides the back of the shell as it were in two parts; in the middle of the base is the round sub-pentagonal mouth, furnished with five prominent lips, between each of the two prominent lips a double series of pores unite, forming a five-rayed star round the mouth. The anus is round, and placed in the upper part of the acute extremity of the shell. These fossils principally occur in St Peter's Mount, Mæstricht.

No. 36 A very interesting and beautiful fragment of a cast of an Echinus in rich amber-coloured Calcedony; its country unknown, as well as the species to which it belongs, it appearing to have been a bowldered fragment.

No. 37. Various fossil spines of Echini, some of which are embedded in flint. These are principally of the Cucumerinæ species, from the chalk-pits of Kent and Essex. The specimen in chalk marked C. is very rare, and appears to have been a spine of the species Sudes Villarum. These spines have often been mistaken for Belemnites, and arranged as such; but the small annular mark at one end, shews indisputably its point of articulation.

Case H.

Case H. Contains thirty-six specimens of fossil substances from Mæstricht. Their peculiar form and structure, so different from those of other districts, render it exceedingly difficult to determine in what genus the greater part of them should be placed, whether they should be arranged among the madre-

pores or the alcyonia. So totally do they differ, (except in one or two instances) from all other known substances, that although it is sufficiently evident that they are organized masses, which have derived their forms from the energies of animal life, yet we find ourselves totally at a loss respecting their original nature. Saloon. Left Apartment Fossils.

In this we are no ways singular, as Mr. Walch, Faujas St. Fond, and our indefatigable countryman Mr. Parkinson, have equally found themselves in the same perplexing state, in respect to these bodies. We shall here quote Mr. Parkinson's description of a similar fossil to the specimen marked No. 38. "From the difficulties, (he says) which accompany an inquiry into its original nature, rendered still greater, by the want of any analogous bodies, with which any instructive comparison might be made, little can be said of it. The organic part of this fossil is confined to the superior part, and is composed of a surface so finely granulated, as to give an appearance like the pile of velvet. On this general surface are disposed, in small depressions, oblong bodies in an oblique but almost horizontal direction, each body being composed of six similarly formed tubes or fibres, from an eighth to a quarter of an inch in length. Most of these bodies taper a little, at their more detached ends, and thereby obtain somewhat of a conical shape. Case H.

"A slender fibre branches from about the centre of some of these bodies, and is inserted in the side of the adjoining depression. In some there are two of these fibrous connecting processes, and in others no traces of them are observable."

Mr. Walch, considers this fossil as a cast of a tubularia of six columns, and from their form thinks they are moulded in striated tubulites, with dentated edges, and longitudinal slight depressions.

Mons. Faujas St. Fond, says, "it is exceedingly perplexing to attempt to class this fossil in a distinct and appropriate place. The extremely minute protuberances on the surface, which from their regular disposal, give to it the appearance of ermine, he thinks has been beyond a doubt, the work of polypes."

The matrix in which these curious substances are found, is a fine tophaceous and pure calcareous substance, deriving a yellow tinge from its impregnation with iron.

No. 39. Is so very singular and beautiful, that we cannot pass it over without a description, though we are in the same predicament as to ascertaining this fossil as in the preceding. It is a light yellowish calcareous stone, on the surface of which arise at nearly regular distances, though not apparently in any determined order, many small semi-globular, striated, and projecting bodies, which, by the aid of a lens of about an inch focus, are found to be formed of plates, regularly placed round the middle of these bodies; the central part being filled by the same kind of substance disposed somewhat in a reticform manner, projecting a little beyond the lamellated exterior part. This peculiar structure presents to the eye a floscular appearance, very difficult to describe. By the aid of the lens it is also discovered, that the greater part of the ground on which these bodies are disposed is adorned by slightly undulating, faint and minute striæ, which, in some places, appear to unite with, or even proceed from, the plates of which those bodies are formed. So numerous are these waving striæ, and so many are the slight traces of them, that we may suppose they were originally disposed over the whole surface. Mr. Walch describes this fossil as a tubercular astroites, on a ground marked with delicate striæ; the projecting parts he thinks may have been casts of a columnar astroites, now reduced to a mamillary form.

Case I. Contains twenty-four specimens of antediluvian vegetable remains; bearing the resemblance of ferns, fruits, and leaves. In most of these the true form of the plant is recognizable, so far as respects the natural disposition of their stems, branches, leaves and in some even of the fruit. However, as Case I.

Saloon.

in the former case, we can add little to the elucidation of these fossils, but a general description.

Left Apartment.

They are principally found embedded in iron-stone nodules, coal schist, &c. in various parts of England, as at Coal-Brook-Dale in Shropshire, Derbyshire, Wales, and Scotland, and the schistus found immediately on the coal stratum of France, Saxony, Bohemia, Silesia, &c.

Fossils.

Case I.

The fossil leaf marked A. we particularly point out to the notice of the visitor, from its great perfection and beauty. This fossil is from Deningen, in a fissile calcareous stone.

For many years past the most minute attention has been paid to these remains, by the most eminent Botanists of the day, in order even to fix, if possible, a few to some known genus and species, but without effect. Among our countrymen, Dr. Woodward, Dr. Plukenet, Mr. Stonestreet, Mr. Boodle, Mr. Doody, Da Costa and Lhwyd; and on the Continent, Scheuchzer, Jussieu, Volckman, Walch, and numerous others; and lately our indefatigable friend Dr. James Edward Smith, President of the Linnæan Society, London, whose general Botanical knowledge has given him so high a rank among the disciples of Linné, and whose particular knowledge respecting the Dorsiferous Plants, would stamp considerable authority on any opinion he should offer respecting this order, which comprehends by far the greatest number of specimens met with in a fossil state, pronounces these remains of vegetables as a sort of botanical riddles, and says "with respect to those which appear to be ferns, the difficulty of determining to what species the several impressions may be referred, is augmented by there being so many things which they may be, and so many things which they so nearly resemble, without being the same, that no correct judgment can be formed of them; that at present it is an absolute impossibility of further removing the veil of mystery which time has placed over these substances."

Right Apartment.

Case K.

Case K. In the left recess of the window of the apartment on the right hand side of the saloon, contains a variety of species of the different genus's of Univalve and Bivalve fossil shells too numerous to admit of specification.

Case L.

Case L. Contains a variety of miscellaneous fossils, the most prominent of which is that elegant and beautiful fossil the head of the Lily Encrinite, with part of a vertebral column supposed to belong to this species; from the lily-like form yielded by its closed arms, it has been hitherto distinguished as the Encrinus, Lilium Lapidium, or Stone Lily.

The Lily Encrinite, is distinguished by each of its arms, dividing into a hand, formed of two fingers, from the inside of which proceed articulated tentacula: the whole folding up in the form of a closed lily.

A genus has been formed purposely for the mineralized remains of these marine animals under the following characters.

Encrinite, the lapidified skeleton of a Zoophite; in which pentagonal, cylindrical, or oval vertebræ, with radiated or stelliform articular surfaces, compose a trunk, supporting a pelvis, from which proceed five arms, terminating in fingers and numerous tentacula. In this genus no less than twenty-one species are distinctly made out; and it must be highly gratifying to the British Naturalist to learn that among her subterranean treasures, Britain reckons no less than fourteen of the above, viz. the Cap Encrinite; 2nd, the Turban Encrinite; 3d, the Pear Encrinite; 4th, the Nave Encrinite; 5th, the Plumose Encrinite; 6th, the Tortoise Encrinite; 7th, the Straight Encrinite; 8th, the Bottle Encrinite; 9th, the Stag's-horn Encrinite; 10th, the Clove Encrinite; 11th, the Digitated Encrinite; 12th, the Briaræn Pentacrinite; 13th. the Fig Pentacrinite; and 14th, the Pentacrinite of Yorkshire. No other species but the Lily Encrinite is in this collection, except some remains of vertebral columns from Dunbar, not yet ascertained from the want of the head or pelvis to refer to. The author although long resident near the spot where these vertebral columns abound, and constantly in search of it, never obtained but one specimen, which he presented to Mr. Donovan proprietor of the

London Museum. It being some years since, he has at this time but a faint recollection of its form, therefore for the present he must defer saying to what species these vertebral columns belong. However, the author is convinced two, if not more, distinct species can be added to the foregoing list from Hermyres, and the quarries adjacent near this city; (see Ure's History of Rutherglen, &c.) a circumstance it is presumed which cannot fail to add to the zeal and industry of those who justly appreciate this science.

Saloon.

Right Apartment.

Fossils.

Case L.

From a careful examination, the curious fact, that independent of the number of pieces which may be contained in the vertebral column, and which from its probable great length may be very numerous, the fossil skeleton of the superior part of the Lily Encrinus consists of at least above twenty-six thousand pieces, viz.

Of the bones forming the pelvis, there are five central cuneiform bones (ossa innominata)	5
Five ribs, five clavicules, five scapula,	15
Ten Arms each containing six bones,	60
Ten Hands, each hand is formed of two fingers, and each finger consisting of at least forty ossiculæ, these in twenty fingers make	800
Thirty Tentacula, proceeding from each of the six bones in each of the ten arms, make	1,800
Thirty Tentacula, proceeding, on the average, from each of the eight hundred bones of the fingers, make	24,000
Total.	26,680

So numerous are the parts formed by the all-wise Creator for the formation of this little animal.

In that part of the skeleton which is now before us, and which formed the superior extremity of the animal, and spoken of as the fingers, tentacula, &c. such a disposition has been discovered by expanded specimens, as is most excellently adapted for the promptly opening and closing of these parts, as the economy of the animal might demand. And it is evident from the structure of these parts, that the animal possessed the power of almost, if not entirely, displaying them in a horizontal position, in which it is supposed the animal would dispose them whilst seeking its prey.

These beautiful remains have been hitherto only discovered in some of the States of Germany. Lachmund first discovered a part of the Lily Encrinus, with its appropriate vertebræ, in the neighbourhood of Hildesheim, in Lower Saxony. Rosinus met with them on the summits of the mountains in the neighbourhood of Obernscheden and Azzenhusen, near the town of Gimenden, in Lower Saxony; Ritter mentions a mountain named Rakenberg, near Goslar, in the territory of Brunswick in Lower Saxony (the specimen in this Case is from this place) and there its remains are so plentiful, that in several places, the buildings are formed of a stone almost entirely composed of its vertebræ, &c. But specimens of the body are now become excessively rare, which is not to be wondered at, when it is considered with what avidity they have been sought after. The matrix in which these remains are found, appear constantly to be limestone, and the organic remains themselves, are always spathose.

No. 41. Is a fossil known in this country by the ill-applied term of Screw-stone, and called by the French Vis Depressoir. It is a cylindrical column, composed of lenticular disks, marked with fine radiating striæ, attached to each other at the centre. The edges of these disks are, of course, from the apposition of two convex surfaces, separated at some distance from each other; though considerable difference is observable, in this respect, in different specimens.

The nature of these bodies was for a long time, entirely unknown. In 1751 Mr. Lieberoth of Hettstedt, published an Essay on the origin of these sub-

Saloon. Right Apartment. Fossil. Case L.

stances in the Hamburgh Magazine, in which he endeavoured to prove, that these cylindrical bodies were the remains of some totally unknown animals, which like the earth-worm, had the power of contracting and of elongating themselves. This opinion was opposed by Mr. Lehman, who contended that these stones owed their peculiar forms to the rays of the Caput Medusæ impregnated with iron. M. Vogel hazarded a conjecture, that these forms might arise from particular species of Strombites. Mr. Schulzd was the first who rightly attributed their formation to the introduction and deposition of an ochreous matter in the cavities of Entrochi.

Whoever will take the pains to examine the internal structure, and the cavities existing in the vertebral column of the Encrinite, and will also attentively view the Screw-stone, cannot but perceive how exactly the cavities of the one correspond with the projecting parts of the other; and how certain it is that the Screw-stone is the cast of the internal part of this column. They are found at Blackenburg and in England. The former is generally of a deeper colour than those found in the latter. This specimen is supposed to be a cast of the internal parts of the vertebral column of the Cap Encrinite of Derbyshire.

No. 42. Theseare Univalve Fossil Shells, which have not as yet been determined precisely to what genus they should belong. Their characters, however, approaching the nearest to those of the genus Delphinula of La Marck, we have described them in such until a more perfect arrangement is made. These fossils are not uncommon in the neighbourhood of Bath. It is somewhat of a discoidal, or rather of a plano-concave form, and is in general from two to three inches in breadth. Its spiral convolutions, which are from four to five in number, are strongly carinated, in the direction of the turns, on nearly the middle of the upper side, and become slightly grooved towards the next inner turn. On the under side, they are of a roundish form, and marked with slight, but frequent oblique rugæ; the turns being so disposed as to form, in the under part, a tolerably smooth funnel-formed cavity. Mr. Walcot was the first describer of these shells in these words, " Depressed volutions three, a sharp ridge runs in the centre of the upper surface of the volutions—Limestone. We have received specimens from Ayr, and from the limestone quarries near Belfast, Ireland.

No. 43. Are in the same situation as the preceding, and we have every reason to suppose they are a species belonging to the same genus, or nearly allied thereto. It is discoidal, but the central projecting termination of the spire is elevated in a peculiar manner, so as at first sight to give it the appearance of being detached from the next turn. On closer examination this is, however, found not to be the case; since a connection is formed by an expansion from the next turn, the rugæ of which are continued very closely and regularly up this central projection to where it has been broken off: this is formed by two flattish turns, which, on the upper surface, are marked by slight longitudinal rugæ, which terminate in two ridges, disposed on the inner and on the outside of each turn. These turns on the lower side are roundish, and are very thickly set with sharp and irregular rugæ, and seem to form a concavity nearly corresponding to the elevation on the other side, but in this concavity an irregular shelly body exists, which appears not to be accidental, but a part of the original shell. They are met with in Hampshire, and Dudley in Worcestershire.

No. 44. These Fossil Univalve Shells appear to be also of the same genus with the two preceding. On the upper part the turns of the spire are seen covered with closely set transverse ribs, the spire terminating in a roundish projection. The turns of the spire are ribbed in the same way on the under side; these also have a projecting shelly body in the concave part, answering, in its situation, to the irregular formed body in the preceding fossils; and to the projecting superior termination of the spire in the same fossil, and in having the

markings of the spiral turns continued upon it. This fossil is supposed to be from Dudley. Neither of the three preceding articles have as yet specific names given them by any author we are acquainted with. Saloon.

45. Several specimens of the Cornu Ammonis, of various sizes and species. For a description see page 22, Glass Case No. 4, left apartment, where this Case of Fossils was placed, before it was determined to describe them separately. Right Apartment Fossils.

46. A Pyritous Slab of Indurated Blue Clay, from Sheppey, replete with fish bones, &c. Case L.

47. Teeth of Fish of various species. These fossils, from their nature and structure, are the best preserved, and are the most numerous remains of these animals. They particularly engaged the attention of the early Oryctologists, who distinguished them by names chiefly derived from their forms, as Glossopetra, Plectronites, Rostrago, Falcatula, &c. Glossopetra, however, was employed as the most general term, expressive of a tongue converted into a stone: and from certain differences of their size and form were supposed to have been the tongues of birds, serpents, &c. Gesner, Reskius, Langius and others, regarded them as the sports of nature; but Steno and Fabius Columna at once asserted their animal origin, and pointed out the animals to which they conceived they had belonged.

The specimen marked H. is supposed to approach the nearest in form to those of the white shark, (*Squalus Carcharias*, Linn.) We have seen specimens of these fossils above five inches in length. Calculating the size of the animal to which such a tooth must have belonged, from the size of the teeth in the white shark of the present time, it cannot be doubted that it must have been above one hundred feet in length. They are found in different parts of the world, but in the greatest number at Malta and the neighbouring islands.

Teeth marked I, are straight conical Glossopetræ. These are supposed to resemble the tongue or beak of a raven, and have been named Ornithoglossæ and Grazirrhinchi. Scilla, who carefully examined the fossils of this description, supposed them to belong to that species of shark, which, at Messina, are called Stampella, (*Squalus Zygæna*, Linn.) the Balance Fish, or Hammer-Headed Shark. These are also from Malta.

Teeth marked K. nearly resemble those of Squalus Galeus, Linn. Its length hardly exceeds its width; and its point is so much inclined to one side, as to form a notch on that side. The edges are very finely serrated. Mons. Cuvier, however, thinks they approach nearer to the Squalus Mustelus than the S. Galeus, but that they are scarcely at all jagged on their internal edge. It seems to be the species named Acanthiodontes by Lhwyd, No. 1417. These are from the Kentish chalk pits.

Teeth marked L. are simply pointed, with a broad base, and no lateral points; somewhat resembling *Squalus Squatina*, Linn.

Teeth marked M. The straight or slightly bent conical teeth, conichthyodontes rectiteretes, have been termed plectronitæ and rostragines, and frequently are called birds bills by the quarry-men. These are from different parts of England.

Teeth marked N. Conichthyodontes striati, are rare fossils, described by Mr. Walch as being of a conical form, round on all sides, with the superior termination as it were truncated, and the whole surface of the tooth so covered with longitudinal striæ, as to give them somewhat the appearance of a dentalite. These are sometimes found in the quarries of Chippenham, and of other parts of Wiltshire and Oxfordshire. The writer has every reason to believe these teeth belong to a terrestrial animal, the Gavial of Cuvier, whose remains are frequently found at Bath, and Charmouth in Dorsetshire. Nearly a complete fossil skeleton of this animal has been discovered not long since near Bath, and is now in the possession of the Rev. Mr. Hawker of Woodchester, in Gloucestershire. It contains great part of the head and the trunk of the animal, and is supposed to be the handsomest spe-

Saloon. cimen of the Gavial, with the gradually tapering jaw, in existence. Another almost complete skeleton was discovered at Charmouth a few months since, by the accidental falling of part of a cliff on the sea shore, by a poor woman, who sold it for 18 guineas. Mr. Hawker has frequently refused 100 guineas for his specimen.

Right Apartment.

Fossils. Case M. contains a miscellaneous collection of antediluvian remains. Among those are twenty-six Cards, containing a variety of minute fossils, principally from St. Peter's Mount, Mæstricht. The Cards A. contain the Casts of that singular shell the Baculites of La Marck. It is defined as a straight cylindrical, or slightly conical shell, divided into chambers by a transverse sinous and imperforated septa; the articulations or sutures being indented in the manner of the battlements of a tower.

Case M.

Faujas St. Fond met with it among the fossils of St. Peter's Mountain, and considered it as a straight Cornu Ammonis. Hist. de la Mont. de St. Pierre, p. 140. The propriety of forming with it a distinct genus, as La Marck has done, is obvious, since on the same principle that St. Fond would name it Ammonites Rectus, we ought to place the Orthoceratites under the genus Nautilus, and name it Nautilus Rectus, as has been done by Baron de Hüpsch, who has also given a figure of the fossil, (Baculites) accompanied with observations on its structure, and on the relationship which it bears to the Cornu Ammonis. This fossil was figured by Langius, and his figure has been copied by Bourguet in his Traité des Petrefications, fig. 316.

The figures of Faujas St. Fond and Baron Hüpsch are similar to these specimens, being merely casts of the chambers of the shell, (Spondylolithes.) It must be remarked that the absence of a siphuncle, assumed by La Marck, cannot be proved from the mere casts of the chambers, which is the only state in which this fossil has as yet been found.

B. Bufonites. These are molar teeth, which are placed in the back part of the jaws, and even on the palate of some species of fish. They are also called Serpents' Eyes, Batrachites, and Crapaudines, from the notion of their having been formed in the head of serpents, toads, or frogs; and on account of their assumed virtues, were preserved, and set in rings and other ornamental articles. These specimens are embedded in a matrix of chalk, which have been cut to the form of serpents' heads to assist the delusion.

Their real origin has, however, been long ascertained. They are the rounded grinders of the jaw and palate of fishes of the genus Anarchicas. The large bufonites are perhaps those of Anarchicas Lupus, or Wolf Fish. A recent head of this fish is placed near this Case for the purpose of comparison. In this recent head may be seen six or more sharp and conical foreteeth in each jaw; and behind these, in the lower jaw and in the palate, are dispersed the round molares or bufonites, with these they are able to crush the crustaceous or testaceous covering of different marine animals, and thus obtain their food. It is extremely probable that some of the smaller bufonites are the molar teeth of fish of the genus Sparus; and particularly *S. Sargus*, *S. Dentex*, and *S. Aurata* or *Gilt Head*, similar teeth existing in the jaws and palates of these fishes.

So strong are the jaws of the wolf fish, that they will even gnaw and leave marks of their teeth on the anchors of ships.

C. Several specimens of Dentalium. These are defined as a tubular, conical, slightly bowed univalve shell, open at both ends. Among these are Dentalium Fossile; and D. Entalis. The first or D. Fossile, approaches by its numerous small longitudinal decussated striæ to Dent. Striatulum, Linn. but differs from that shell in not being angulated, and in the cone which it forms, diminishing more slowly towards its apex. Another species, or a var. of the last, resembles Dent. Sexangulatum, Linn. In this shell the minuter striæ, interposed between the large angular ones, vary in their number from one to three. Some of these fossils possess all the characters of this species, but have their longitudinal striæ interrupted by obliquely disposed, transverse, or annular striæ, placed at various distances. These probably should be con-

sidered as Dent. Angulatum. Several of these specimens have their hollow internal parts filled with a substance resembling porcelain. From St. Peter's Mount, Mæstricht. Saloon.

D. Minute Fossil Asteria, from St. Peter's Mount. Right Apartment.

E. Minute Corals, Coralloids, &c. from same place.

F. Detached Bones of a fish palate, of a dice-like form, from ditto. Fossils.

G. Fossil Oyster, nearly resembling the common oyster, from Shotover Hill, Oxfordshire. Case No. 1.

Case 1. in the Right hand Apartment contains above one hundred specimens of Fossil Woods in Sand Stone, presented to the Museum by Capt. J. Laskey. These were collected from a stone quarry near Dalkeith, which abounds with fossils of this description. It would be in vain to attempt a description of these remains, as no recent analogue have as yet been met with, whereby we can be led to demonstrate a single specimen. But we wish to direct the attention to the fossil marked A. from the state of perfection in which it remains.

The general figure of this fossil, is that of a long, irregular, and compressed cylinder, tapering to a point at one end; here it becomes very thin, and by its general outline, strongly marks it as a fruit bearing resemblance to a cucumber, the surface of which is pretty thickly beset in quincunx order with holes, from the bottom of which rise small papillæ like tubercles, but which being sunk in the hollows, hardly ever rise above the general surface. A substance with a rough imbricated surface, and about one-sixteenth of the thickness of the whole fossil is seen passing through the centre of the cylinder, but more to the compressed side; and in some specimens there appears a sulcus, one edge of which rises into a sharpish ridge, running in a line parallel with it. See specimens in same Case marked X. These agree with the descriptions and figures of many Oryctologists, by which it appears they described and figured from mutilated specimens, probably having never met with the complete fossil.

The substance of these fossils is either a fine grit stone, with small micaceous particles, or a stone in which no grit appears; but such a mixture of argillaceous and siliceous earth as approaches to a jasper. See specimen marked XX. The colour of both these kinds of stones varies with different shades, from the lightest to almost the darkest brown.

No conjecture on which we can venture to rely, has yet been offered with respect to this fossil. The Arbor Lavendulæ Foliis, Dr. Woodward says, hath studs like these, and set in the same quincunx order. Mr. Whitehurst thinks it most resembles the remains of an Euphorbia of the East Indies. Indeed there would be little difficulty in referring it, either to the Genus Euphorbia or Cactus, were it not for the difficulty of explaining the nature of the internal substance. The surfaces both internal and external, are frequently covered with a bituminous matter; the interstice being closely filled with stony matter, which would dispose to the suspicion of their having been distinct vegetable bodies, which accident has thus united; but, on the other hand, the frequency with which they are found connected, and the similarity of the mode in which they always appear to have been united, seem to point out that union to be natural, and not accidental. Dr. Woodward described this internal body, in his earlier descriptions, as a medulla or pith, but afterwards a more careful view of this body, (he says) brought him to think it rather a commencement or beginning of a branch, arising out of the main trunk. The data "which we possess (says Parkinson, speaking of this fossil) would almost lead to the supposition, that the plant to which this fossil owes its origin was of the succulent kind, which contained a more solid part in its succulent substance—but conjecture seems to be useless, since the plant appears to have differed so much from any thing which we know, as to leave us without the opportunity of deriving any aid from analogy, and but little from comparison. Unable (he continues) to find sufficient points of correspondence between it and

Saloon.

Right Apartment.

Fossils.

Case No. 1.

any plant which is now known to exist, we must be satisfied with Dr. Woodward, whose opportunities for judgment, from the multitude of his specimens, perhaps exceeded those of any one else, to submit to leave it among the fossilia incognita." Vide Parkinson's Organic Remains.

The specimen marked B. is very rare, it resembles a piece of rotten wood, the outer coat still retaining its woody texture, while its internal part is completely changed to sand stone. It is of a deep brown colour, probably from the bituminous fermentation under which it has evidently passed; it is friable, and when brought into contact with the flame of a candle, burns with a brilliant white flame, and a bituminous smell.

The fossil marked C. is also very singular and rare, being the only specimen of the kind we ever met with, or recollect to have seen. This is probably of a species of Arundo or Bamboo, of a squarish form, about twelve inches in length, three inches in breadth, and two inches thick; on the sides are the remains of the leaf stalks, nearly the size of a finger at the base, which appear to have been alternate; it is a fossil of great curiosity.

D. The base of the stem of a tree about two feet six inches in length fossilized, the space occupied by the wood, being now silicious grit; the bark having become carbonized, remains adhering to the external surface, in appearance like coal. The peculiar structure of this tree is very plainly seen, in the numerous projections and furrows regularly arranged and strongly marked on the grit. This specimen was found in a quarry on the banks of the Ardrossan Canal, and presented by THOMAS C. CARPENTER, Esq. of Lyme in Dorsetshire, 1813.

Left Apartment.

Case No. 3.

The Case No. 3. in the Left apartment, contains the fossil remains of various animals, among which are several teeth of the Mastodon or Mammoth, the Elephant, Rhinoceros, &c. These we shall briefly describe, beginning with the teeth of that stupendous animal the Mastodon or Mammoth.

No. 1. Several teeth of the Mastodon or Mammoth are in the collection, one of which has been lately presented to the Museum by Professor MUIRHEAD, and shews ten points in pairs on the surface of the crown, and a small one in front. Another presented by Mr. CHARLES WILSONE, Surgeon, has six points in pairs, and weighs about three pounds avoirdupois. The others originally belonged to the Museum. The one marked A is the largest we have seen; it has six points in pairs and a single point in front on its crown, and weighs above five pounds. It is probable that this tooth, when in a perfect state, might have possessed eight points, as part of it appears to have been broken off at one end.

It is presumed all these stupendous remains are from the Ohio, North America, and are the most gigantic specimens of fossil animals that are known, and whether we contemplate its original, mode of existence, or the period at which it lived, our minds cannot but be filled with astonishment. We have, in our description of the Hall of the Elephant, described the thigh bones and part of a tusk of this amazing animal, to which we refer. (See page 74 & 75.)

The first notice we have of these astonishing remains was about the year 1712, in a letter from Dr. Mather of Boston to Dr. Woodward, which was extracted from a MS. work entitled, Biblia Americana. They were there supposed to have been human, and that they belonged to a race of giants: these were discovered in Albany, New England. In 1740 numerous similar bones were discovered at Kentucky on the Ohio, which were dispersed among the European Virtuosos. In 1765 several of these remains were again found by Mr. G. Croghan, four miles to the S. E. of the Ohio, and were conveyed to England. Dr. Hunter had the examination of them, and it is presumed what is now in the Museum formed a part; the Doctor published in 1768 a paper on these fossil remains in the Philosophical Transactions, vol. lviii. in which he supposed them to have belonged to some carnivorous animal, and named it Pseud-Elephant, or animal incognitum.

Mr. Peale, proprietor of the Museum at Philadelphia, purchased in 1799

a quantity of bones found in the state of New York, in the vicinity of Newburgh, which is situated on the Hudson, or N. River, together with the right of digging for the remainder. In 1801 he made every exertion to discover them without effect. After several attempts at various situations he was enabled by collecting a sufficient number of bones to form almost two complete skeletons, one of which he exhibited in London about the year 1802, which the author frequently contemplated with wonder and delight. In his description of the skeleton, Mr. Peale agreed with Dr. Hunter, that it must have been a carnivorous animal, from the formation of the teeth, the disposition of the enamel, the incapacity of the jaw for lateral motion, and from the condyloid process, which is finished with an oblong head, being inserted into a transverse groove, which, to him, was sufficient reason for this opinion.

The teeth of the upper and lower jaws when shut, he observes, must have had their points and depressions fit into each other, like the teeth of two saws; and whilst shut must have been immoveable laterally, and consequently incapable of triturating, like the teeth of graminivorous animals. That it could not be an Elephant, as the root or fangs of the teeth are inserted into the mass of bone, which not only surrounds the roots, but divides one root from the other; whereas in the Elephant the grinders occupy one large and uniform cavity from which they are gradually protruded. A comparison may easily be made from the fossil specimens of the teeth of Elephants also in this Case.

Lastly, these astonishing remains have been strictly examined by the illustrious Cuvier in the 46th No. of the Annals of the National Museum of Natural History at Paris. The grinders, he observes, are formed of two substances only; an internal bony substance, and a thick coat of enamel: the form of their crown is in general rectangular, the hinder ones being rather narrowed behind. The crown is divided by widely-spreading grooves into a certain number of transverse risings, each of which is divided in the contrary direction into two large obtuse, and somewhat quadrangular and pyramidical points; the whole crown when not worn being beset with large points disposed in pairs. Mons. Cuvier particularizes three sorts of these grinders, nearly square, with three pair of points; rectangular with eight points; and others still longer with five pair of points; and a single smaller one. A remarkable circumstance attends the appearance of these teeth, as those with three pair are generally much worn, those with eight points are less worn, and those with five pair, &c. are seldom worn in the least; and he argues from these appearances their various situations; those with three points being the foremost, and appearing the first; whilst those with ten are the hindmost, and appear the last.

From observations made on the several lower jaws which have been found, it appears that the two first sorts of teeth may exist in the mouth of the animal at the same time; but that those of the latter sort follow the others. Mons. Cuvier says, perhaps there may have been, in the infancy of the animal, a tooth with four points, which would be cast early. This he was led to conjecture, from having been informed by M. de Beauvois, that in a jaw belonging to Dr. Barton, there appeared to be marks of an alveolus before the tooth with six points. There can be little doubt but that the teeth succeeded to each other as in the Elephant, there never, however, being more in the mouth at once than two, and at last only one.

For want of attending to this succession of the teeth, and supposing many of these teeth to have existed in the mouth at the same time, very erroneous conjectures have been formed respecting the size of this animal. Thus Buffon observes, that the square form of these enormous grinders prove that several were in the jaw at the same time. Epoques de la Nature, Notes Justif. 9. But if we suppose there were six or even four on each side of each jaw, how enormous must that head have been which contained at least sixteen such teeth! Reckoning on these fallacious grounds, he concludes the animal must have far

Saloon.

Left Apartment.

Fossils.

Case No. 3.

exceeded the size of the largest elephants, whereas we have no proof at present of this animal surpassing twelve or fourteen feet in height, whilst agreeable to Buffon's own account, the Asiatic Elephants are sometimes fifteen or even sixteen feet high.

From the remains of the under jaw we observe, that like the Elephant and Morse, it had neither canine nor incisive teeth; that it terminated in the fore part, as in those animals, in a hollowed point, which was, however, much shorter and less acute than in the Elephant. No perfect specimen of the skull of this animal has been hitherto found.

Mr. Peale was the first who ascertained that this animal was provided with tusks, by discovering the remains of a skull, in which the alveoli were evident. These tusks resemble those of the Elephant, they are inserted in the incisive bone, and are composed of ivory, the grain of which shews curvilinear lozenges, enveloped by a substance which is not of the texture of ivory, but is formed of fibres converging towards the centre; and which though less hard than the enamel, seems very nearly to resemble that substance. See specimen of fossil Tusk, marked 2.

3. Several Fossil Teeth of Elephants. As these fossils sufficiently speak for themselves, we need not enter into a diffuse description of them. We shall therefore only notice that the tooth, (A. 3.) possesses no less than twelve double plates within the length of nine inches, also three lines of detached rings or points formed by the digitated processes of the plates.

Mons. Cuvier had been long of opinion that the fossil Elephants were specifically different from the Asiatic Elephant. In this he became confirmed in his opinion from the circumstance that he almost always found the plates in the teeth of the fossil species thinner, occupying sensibly a less space, and being consequently in greater number in the same length, than in the recent teeth. From this difference in the thickness of the plates, it follows that the number of these plates which are brought into action at once, should be greater in the fossils than in the Asiatic. Mr. Corse observes in Philos. Trans. 1799, that in the latter there are seldom more than ten or twelve in use at once; but in the fossil teeth, there are frequently twenty-four. Mr. Cuvier's second distinctive character is, that the lines of enamel are thinner and less scalloped or crenulated in the fossil than in the recent, he having only noticed one exception. A third character is, he thinks, yielded by the much greater absolute, as well as proportional width of the fossil, this being in the proportion of eight to six.

The remains of this animal are widely spread over the face of the globe. In France they have been found in a great number of places, and in situations which prove their deposition at a very remote period. The whole valley through which the Rhine passes, yields fragments of this animal; Holland abounds with them, and even the most elevated parts of the Batavian Republic are not exempt from them.

The whole of Germany and Switzerland appear particularly to abound in these wonderful relics.

The banks of the Danube produces them. In the valley of Altmühl is a grand deposit of these remains. The bones found at Krembs in Sweden; at Baden near Vienna; in Moravia; in different parts of Hungary and of Transylvania; at the foot of the Hartz; in Hesse; at Hildersheim, all appear to be referable to this animal, also those found on the Elbe, the Oder and the Vistula. Different parts of the British Empire are not less productive of these remains. London, Brentford, Harwich, Norwich, Gloucestershire, Staffordshire, Warwickshire, Salisbury, the Isle of Sheppey, and indeed in several other parts of Great Britain they have been met with.

When we add to those places already mentioned, Scandinavia, Ostrobothnia, Norway, Iceland, Russia, Siberia, Tunis, America, Hue-huetoca near Mexico; and Ibarre in the province of Quito near Peru, it will appear that

there is hardly a part of the known world whose subterranean productions are known to us, in which these animal remains have not been discovered. Saloon.

Notwithstanding the frequency with which the fossil bones of Elephants have been found, there are scarcely any fossils of a known genus of animals, respecting which so many mistakes have been committed. At no very remote period, not only the bones, but even the teeth have been given to a race of giants; and Aldrovandus, Kundmann and others, have mistaken these fossil teeth for those of other animals. Leibnitz who wrote in 1749, gives in his 12th plate of his Protogæa, the engraving of an Elephant's grinder, which he describes as dens animalis marini; and even M. de la Methiere, in his excellent work published so lately as 1797, describes a tooth found in Dauphiny, as belonging to an Elephant of Africa, which has since proved to have been a tooth of the great fossil animal the Tapiir; so far, indeed have mistakes respecting the remains of the Elephant proceeded, that Kircher, Mercatus and Aldrovandus have described the fragments of Elephant's teeth as petrified hands (Chirites.) Kundmann went so far as to insist not only that one of these fragments was the petrified paw of a large baboon, but that the skin, flesh, nails and veins were all discoverable in it in a petrified state; even the accurate Walch refers to this specimen as a real petrifaction of the ape. Right Apartment. Fossils. Case No. 3.

From the ingenious observations of Mr. Home and of Mr. Corse on the formation of the teeth of the Elephant, Philos. Trans. 1799, we learn that the bodies of which we have just spoken, and which the older Oryctologists considered as petrified hands, were the separated plates of which the grinders are composed: the more extended parts of these productions having been supposed to be the fingers. The unorganized and looser substance of the cortical crust disintegrates sooner than the two substances of which the plates are formed; hence in most fossil teeth, this substance is in a very loose state, and in some it has been quite removed, and has left the plates entirely uncovered. (See specimen of one of these detached plates marked D.)

The fossil tusks of Elephants have the same curvilinear appearance as those of the Mastodon or Mammoth, these being the only species of ivory that shews it.

4. Several Fossil Teeth of the Antediluvian Rhinoceros. The fossil remains of the Rhinoceros have been generally found in the same countries where the remains of Elephants have been discovered; but they do not appear to have so generally excited attention; perhaps but few of those who discovered them were able to determine to what animal they belonged. Thus a tooth of this animal is described by Grew merely as the tooth of a terrestrial animal; and the remains of this animal, found in the neighbourhood of Canterbury, were supposed to have belonged to the Hippopotamus.

In Hartzberg, in the principality of Grubenhagen, Quidlembourg, Darmstadt, the borders of the Rhine, Mentz, Strasbourg, the neighbourhood of Cologn, Westphalia, numerous parts of France, and in several parts of Great Britain, have the remains of the Rhinoceros been found. In Siberia these remains have been discovered in immense quantities. Pallas, whose researches have been particularly directed to this part of the world, made the astonishing discovery of a complete Rhinoceros, still covered by its skin and buried in the sand on the borders of the river Wiluji.

From various comparisons of the fossil bones with those of the living species, M. Cuvier was able to conclude, that the head of the fossil species is not only absolutely much larger, but that it is also much larger in proportion to the height of the limbs; and, consequently, that the general form of the animal must have been very different from that of the living species.

5. An uncommon large vertebra from Sheppey. To what animal it belonged is unknown; it measures in circumference 20 inches, and weighs 1½ lbs. though not in a perfect state.

6. Is a very curious fragment of a bony substance of a dark brown colour,

Saloon.

supposed to be from Sheppey Island, nearly resembling the proboscis or horn of the Sword Fish. It is of a conical form, and appears to taper similarly to the weapon of that fish

Left Apartment.

7. Is an uncommonly elegant and large mass of the scales of some unknown fish; it is presumed it was found also at the Isle of Sheppey

Fossils.

Case No. 3.

8. An excessive rare fragment of a fossil claw of the Megalonix, the Antediluvian Sloth; it is supposed to have been brought from America, where the remains of this extinct animal was discovered a few years since, and described by Mr. Jefferson in the Trans. Americ. Philos. Society, vol. iv. p. 246. He says the substratum in the western part of Virginia, beyond the Blue Ridge, is a limestone, abounding with large caverns, the earthy floors of which are impregnated with nitre. In digging the floor of one of these caves in the county of Green Briar, the labourers at the depth of two or three feet, came to some bones, belonging to some animal which was to them unknown, among which was three claws (and other bones of the feet) one of which was seven inches and a half in length. He considered himself as not possessed of sufficient data to allow him to approximate these remains nearer to any existing animal, than by considering it as one of the unguiculated quadrupeds. Assuming then the Lion as the largest of the quadrupeds of this family, he considered it as the fittest animal with the bones of which he might compare the bones of the Megalonyx; but the size of the claw seems to have staggered him; for he observes, if we were to estimate the size of this animal by a comparison of its claw with that of the Lion, on the principle of *ex pede Herculum*, it would give us a being out of the limits of nature.

Mons. Cuvier being furnished with some of these remains, and by plaster casts of the bones mentioned above, and by a tooth from the same cavern, presented to him by M. Palisat de Beauvois, he was enabled to determine that these fossil bones were the remains of an animal of a species of Sloth (Bradypus) hitherto unknown.

The under compartment of this Case contains an assemblage of fossil bones not ascertained, shells, &c. Among these an unique specimen of the shell Chama Cor, with the nacre or shell remaining in a very perfect state, almost retaining its original colour. Mr. Parkinson says, casts of this shell are frequently met with, but as far as he has learned the shell has never been found complete.

10. A large fragment replete with bones from the Rock of Gibraltar. We cannot help noticing here in a more particular manner, these fossil bones, as several erroneous opinions have been given that they are the bones of the human skeleton. From every specimen examined by Naturalists from their first discovery to the present time, it positively appears that not a single vestige of human has yet been discovered. In fact they can hardly be deemed fossil, being found only in the perpendicular fissures of the rock, and in some of the caverns of the mountain, all of which afford evident proofs of their former communication with the surface. They are met with in a calcareous concretion of a reddish brown colour, with an earthy fracture and considerable induration. In this concretion are found the bones of various animals of all sizes, lying in all directions, intermixed with land shells of the genus Helix or snails, (not a single fragment of marine shells have yet been discovered), fragments of the calcareous rock, and particles of spar, all of which materials are still to be seen in their natural uncombined states, partially scattered over the surface of the mountain. These having been swept by heavy rains at different periods from the surface into the situations above described, and having remained for a long series of years in those places of rest, exposed to the penetrating action of water, have become enveloped in, and cemented by, the calcareous matter which it deposits. This concreting matter may in some places be traced from the lower part of a deep perpendicular fissure, up to the surface of the mountain in many parts of the rock. This concretion exists unmixed with bones of any kind; and on the elevated parts of the mountain, masses are found consisting of snail shells combined with a

mass of opaque stalactitical spar of a yellowish brown colour. This spar often incrusts the inner surface of the hollow bones, sometimes the spathose crust is colourless, and sometimes of a reddish colour. Dr. Hunter at one time supposed these bones were human, but on farther observation, he was convinced that this opinion was erroneous, and by inspection of more distinct specimens, he corrected his former report, and determined them to be the bones of quadrupeds. Mr. John Hunter was enabled by minute examination afterwards, fully to prove these bones belonged to the family of ruminants, and to the genus Lupus, and also to a class of birds; some he also observed belonged to a small dog or fox. Skulls have also been found which were supposed to have been human, but on investigation they proved to have belonged to a species of monkey, being too small for any of the human species. Vide Mr. John Hunter's papers in Phil. Trans. 1794, p. 412. and a minute description by Col. Imrie in Trans. of Royal Soc. Edin. p 191.

Saloon. Left Apartment. Fossils. Case No. 3.

To the indefatigable and justly celebrated Mons. Cuvier, whose enquiries have tended to enlighten the world in so great a degree respecting the fossil animal remains of the Antediluvian world, we are indebted for still more correct information respecting these bones. He says "The greater number of these bones were evidently broken before they became encrusted, but do not appear to have been bowldered; they are disposed in every direction in the red stone which encloses them, and by their not touching each other, we have proof that the concreting matter formed around them as the bones gradually fell in. This matter, he observes, resembles well burnt brick earth, and has many small cavities, some of which are partly, and others quite filled, with a spathose matter, similar to that found in the cavities of the bones.

"The bones, are decomposed, and very white; they however are not wanting in hardness, and may be even considered as petrified, (we do not agree with M. Cuvier in this last observation), the enamel of the teeth is unaltered; the impressions of shells are those of land snails; no traces of sea shells having been found."

M. Cuvier is satisfied, that among the considerable number which he possesses of these fossil bones, there are none but the bones of a ruminant, hardly of the size of a deer. These from there not having been any horns or branches found, and from the lower head of an Os Femoris which he posesses resembling that of the antelope, more than that of the stag or sheep, he is disposed to refer to the antelope. In the propriety of this, he is confirmed by the appearance of the teeth, and the other bones which he possesses.

The lower shelves of this Case contain some large specimens of coralloid bodies, &c. from St. Peter's Mount, Mæstricht.

The Fossils in the adjoining Case, No. 4, are described at page 22.

We have been minute in describing the different objects of Natural History, and particularly Fossils, from a desire of exciting an interest in this branch of study, for which this part of the kingdom affords such an ample field.—It has been an object, towards the completion of which, considerable progress has been made, to procure specimens of all the varieties of Scottish Minerals, for which purpose contributions of unknown or curious specimens are most thankfully received at the Museum.

THE END.

WILLIAM LANG, PRINTER, 62, BELL-STREET, GLASGOW.

Lately Published,

By JOHN SMITH & SON, GLASGOW,

And Sold by Longman, Hurst, Rees, Orme and Brown, London, and by Arch. Constable and Co. Edinburgh.

1. A Catalogue of Books, including many rare and valuable articles, in perfect condition and in the original bindings, now on Sale by John Smith and Son, Booksellers, Hutcheson-Street, Glasgow.
2. A Catalogue of Books on Medicine, Surgery, Anatomy, Midwifery, Chemistry, Natural History and Botany, including the entire valuable Library of an eminent Medical Character deceased, consisting of many rare and curious Medical Works, in fine preservation and elegant bindings, now on Sale, by John Smith and Son, Hutcheson Street, Glasgow.

*** J. Smith and Son, give the full value for Libraries or Parcels of Books, either in money or exchange. They also arrange and catalogue, or value Gentlemen's Libraries, on moderate terms.

3. The Isle of Palms, and other Poems, by John Wilson, 8vo. 12s. a few copies on large paper, 21s.
4. Scottish Historical and Romantic Ballads, chiefly ancient, with Notes and a Glossary, by John Finlay, 2 vol. 8vo. 14s.
5. Lines Sacred to the Memory of the Rev. James Grahame, Author of the Sabbath, &c. quarto, 2s.
6. Popular Instructions for the Recovery of Persons apparently Dead, in cases of Accidents, Sudden Diseases, &c. 12mo. 1s.
7. Essays on Shakespeare's Dramatic Characters, by William Richardson, Esq. 6th edit. 8vo. 10s. 6d.
8. Observations on Cases of the Excision of Carious Joints, by James Jeffray, M. D Professor of Anatomy and Surgery, College, Glasgow, 12mo. 4s. 6d.
9. Considerations addressed to a Young Clergyman, by the Rev. Stevenson MacGill, D. D, Glasgow, 12mo. 5s.
10. A Collection of Sacred Translations, Paraphrases and Hymns, by the Rev. Stevenson MacGill, D. D. Glasgow, 12mo. 4s.
11. Cases of Diabetes, Consumption, &c. by Robert Watt, M. D. 8vo. 9s.
12. Vignettes engraved on Wood by Kirkwood and Son, Edin. 8vo. 1s.
13. Sketches of Perthshire, including the Scenery of the Troshachs, by the Rev. P. Graham, D. D. 8vo. 10s. 6d.
14. Travelling Map of Scotland, engraved by Kirkwood and Son, Edin. Royal Size, in Case, 7s. 6d
15. A Guide to Loch Cathrine, Loch Lomond, &c. engraved by Kirkwood and Son, in a Case, 4s.

In the Press,

A Treatise on the History, Nature, and Treatment of Chincough, illustrated by numerous Cases and Dissections, to which will be subjoined, an enquiry into the relative mortality of the principal Diseases of Children, and the numbers who have died under ten years of age in Glasgow, during the last thirty years, by ROBERT WATT, M. D.

John Smith & Son having recently made considerable purchases, among which are many works of great rarity and value, propose speedily to publish a general Catalogue.

5/m
4